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ABSTRACT

Computer assisted Instruction (CAI) in economics can comprise one possible strategy for enhancing the instructional environment in economi at all levels. Currently, about 90% of the school districts in th United States are using a computer. Over half, 54%, of these districts are using the computer as an instructional tool. Less than 13% of the schools use CAI in the social sciences. While no data are available, it is evident that the percentage of schools using CAI for teaching economics is a far smaller figure. The speed with which the computer assumes a new role in economics instruction depends on cost of equipment, teacher acceptance of this new instructional tool, and the availability of high quality software. The Mankato State University Center for Economic Education has been designated by the Joint Council on Economic Education as the National Specialized Center for Computer Assisted Instructio. To provide assistance to others, the Center has collected computer assisted programs in economics. An annotated listing of these programs and an extensive bibliography of the literature concerning the use of the computer in teaching economics are included in this paper. (RM)

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REPORT FROM THE NATIONAL SPECIALIZED CENTER COMPUTER ASSISTED INSTRUCTION IN ECONOMICS

Annual Meeting of Economic Educators
Honolulu, Hawaii
October 15, 1981

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INTRODUCTION

The Mankato State University Center for Economic Education is committed to the task of improving instruction in economics at both the college and pre-college levels. We believe that economic understanding is essential if our citizens are to make informed decisions in the market place and the polling place.

Successful teaching-learning experiences involve many factors. While we have an imperfect knowledge of what is necessary for successful teaching, we know that two factors are important. First, instruction in economics must be directed towards fundamental ideas, ways of thinking, tools of analysis, and the applications of these ideas to social realities. Second, the instructional procedure must be varied and appealing if masses of students are going to be taught with any degree of effectiveness.

Computer Assisted Instruction (CAI) in economics can comprise one possible strategy for enhancing the instructional environment in economics. In this respect the computer relates to the instructional program in much the same way as the use of films, video-tapes, box games and other instructional paraphernalia which are now seen as common classroom tools. Fortunately, computers are already available in the majority of schools.

Currently, about 90% of the school districts in the United States are using a computer. Over half, 54%, of these districts are using the computer as an instructional tool. Major usage is in secondary school mathematics and natural science. Less than 13% of the schools use computer assisted instruction in the social sciences. While no data are available, it is evident that the

percentage of schools using CAI for teaching economics is a far smaller figure.[1]

The question of whether or not the computer will take its place as a viable tool for teaching economics in the future seems almost certainly to be answered, yes. The speed with which the computer assumes this new role is dependent upon several factors. First, computer equipment for instructional purposes must become available for school use at prices which are affordable. Second, economics teachers must feel comfortable with using the computer as an instructional tool. Third, an extensive and diversified package of high quality economics programs must be available for the economics teacher to use. Finally, these CAI programs must be transportable and affordable.

Current technological changes are reducing the problem with affordability of computer hardware. Until recently, the only feasible strategy for making computer use affordable to the masses was through the use of equipment sharing.[2] Today's micro-computers open the door to computer use by virtually all schools.

Now that the equipment affordability question seems to be at the verge of solution, our attention needs to focus on the other two obstacles, teacher acceptance of the computer and program availability. In the past, teachers have seemed remarkably willing to introduce new instructional devices. If teachers can be led to understand that the computer is no more ominous or

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[1] Chambers and Bork, Computer Assisted Learning in U.S. Secondary/ Elementary Schools, Center for Information Processing, California State University, Fresno, Research Report No. 80-03, July, 1980.

[2] The Minnesota Educational Computer Consortium (MECC) is an example of such a time-sharing system. Minnesota schools have teletype access to the MECC computer and its library of programs. However, most economics teachers seem to have been reluctant to use the MECC system, probably because these teachers felt uncomfortable with the equipment, but also because the teletype terminals were nearly always under the physical control of math and science teachers who were reluctant to share their monopoly control.

threatening than the other equipment they have already begun to use, this obstacle should be largely removed. Economic educators could play a major role in helping this transition to come to pass. Workshops and in-service courses that offer teachers hands-on experience in working with the computer seem ideally suited to reach this objective.[3]

Probably the most difficult problem still facing us, today, is the problem of availability and affordability of good CAI programs to be used in teaching economics. Our Center has been concerned with this problem for many years as we have attempted to assemble a library of good CAI materials in economics for use at our institution. This is not an easy task. Until now, commercially developed CAI materials in economics have been very limited.[4] While it is evident that many individual economics teachers have developed and used computer programs for teaching economics, awareness of who has what in the way of materials has generally been very limited. To further complicate matters, existing CAI materials have been programmed in a variety of different languages for use on a variety of different types of equipment. This makes it virtually impossible for a non-specialist to acquire materials and translate these into a format which is usable on the particular configuration of equipment available in any

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[3]The Mankato State University Center for Economic Education offered such an in-service course during the winter term of 1978-79. Those teacher participants now report that they use the computer as one additional tool for enhancing their respective instructional programs in economics. The Mankato Center has also tried to use a one-day workshop to acquaint teachers with a specific computer program. In the spring of 1980 the Center hosted a teacher-banker workshop featuring a new computerized version of "You're The Banker" which had just been developed by the Minneapolis Federal Reserve Bank. The author is concerned, however, that one day is not long enough to cause teachers to overcome their fear of the equipment.

[4]Copyright problems may hamper the development of commercial programs. It is extremely easy to duplicate programs that are available in floppy disk form. This may reduce the potential profits from the sale of such programs as teachers will be tempted to give away programs to their friends.

given school. Even the specialist must undergo substantial cost in time to make the necessary conversions. Only the most dedicated will endure the obstacles for an uncertain instructional benefit.

Again, technology may be paving our way to future success with computer assisted instruction. Given the affordable prices of micro-computers, thousands of different schools can be expected to own a given brand of computer. Schools which use the same type of equipment will then be able to duplicate and exchange CAI programs with one another at a very nominal cost in terms of both time and financial resources. One more example from Minnesota will illustrate this point.

The Minnesota Educational Computer Consortium has made the decision to provide MECC members with software for one brand of micro-computer. Programs already available on MECC's big, time-sharing computer are being translated into a format that is usable on this micro-computer. Schools that are affiliated with MECC can load these programs onto their micro-computers either by means of telephone connection to the central time-share computer or by ordering pre-programmed floppy disks which are mailed to the schools.

The future looks bright for computer assisted instruction in economics. The author's optimism is based on the expectation that a proliferation of computers will bring a proliferation of economics program writers. Until that happens, it is essential that we gain a collection of those materials which have already been developed. Furthermore, these materials need to be cataloged, evaluated, and publicized so that prospective users might be made aware of what is available.

The Mankato State University Center for Economic Education has already committed a substantial amount of energy in pursuit of this objective. By no means do we claim to have this task completed. Indeed the task by its nature can never be finished. However, we have offered to share information with other

institutions, and the Joint Council on Economic Education has designated our Center as the National Specialized Center for Computer Assisted Instruction in Economics. We have accepted the designation with humility and intend to provide assistance to others within the limits of our capacity.

The next segment of this paper is comprised of an annotated bibliography of over sixty computer assisted instruction programs in economics. The range of intended users of these programs extends from elementary school to graduate school level economics. (Hopefully the annotation implies something about which programs apply to which audience!)

Persons who desire more information concerning any of these programs are invited to ask questions of the authors. For most of the listed programs we have sample runs. Several of the programs are available for use on either a large computer or a micro-computer.[5]

The last section of this paper contains an extensive bibliography of the literature concerning the use of the computer in teaching economics. This bibliography has been in a continuing state of development over the past fifteen years. We are pleased to share this bibliography with members of the economic education network who may wish to make further explorations into computer assisted instruction.

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[5]Mankato State University uses Apple II micro-computers. Our University employs a large Univac computer. However, the Center for Economic Education has its CAI programs on the MECC system. MECC uses a Control Data computer.

SOURCE OF PROGRAMS

Source	Number
American College of Life Underwriters Bryn Mawr, PA	54
Askalani, Mohamed Mankato State University Mankato, MN	17
Attiyeh, Richard University of California San Diego, CA (CONDUIT)	25, 26, 27, 28, 29, 30
Dunham, Loren Fairmont High School Fairmont, MN (MECC)	4, 49
Daellenbach, Lawrence & Others University of Wisconsin-LaCrosse LaCrosse, WI	6, 19, 36, 38, 48, 51
Emery, E. David St. Olaf College Northfield, MN	18, 20, 22, 37
Forrester, J. Boston, MA	52
Frost, Jerry Iowa State University Ames, IA	2, 3, 45
Gupta, Shiv Findlay College Findlay, OH	39
Hanlon, J. William Winona State University Winona, MN	35
Hughes, Barry APSA Washington, D.C	50
James, Klassen, and Logan Huntington Two Computer Project State University of New York Suny Brook, NY	21, 23, 24, 39, 40
Jamison, Bob MECC Lauderdale, MN	41, 42, 43, 44

Source	Number
Northwest Regional Laboratory (MECC)	16
Paden, Don University of Illinois Urbana, IL	50, 60, 61
Schenk, Robert St. Joseph's College Rensselaer, IN	8, 9
Stronge, William Florida State University	7
St. Thomas College St. Paul, MN	53, 55, 56, 57, 58, 62
Technica Pleasant Hill, CA	1, 46
TIES 1925 W. County Rd. B2 St. Paul, MN	47
Treyz, George University of Massachusetts Amherst, MA	10, 11, 12, 13, 14, 15
Wheeler, Hoyt and Hayen, Roger Industrial Relations Center University of Minnesota Minneapolis, MN	5
Williamson, David and Others Notre Dame University South Bend, IN	32, 33, 34

ANNOTATED BIBLIOGRAPHY OF SELECTED COMPUTER-ASSISTED INSTRUCTION PROGRAMS IN ECONOMICS

1. BALPLAY
   This game of international monetary transactions cast the student in the role of a policymaker who should balance the international monetary transactions in five time periods. The student has control over four policy instruments: Taxes on investment abroad, tariff rates, government spending abroad, prime interest rate. It keeps a score based on students performance at the end of each period.

2. BANK
   This game simulates the operation of a bank. The student plays the role of a bank president who aspires to increase the net worth of the bank. The user makes decisions related to: buying and selling securities, making loans, and borrowing from the Federal Reserve Bank. Random functions are used to introduce deposits and withdrawls in demand and time deposits accounts.

3. BANKRUPT
   This game simulates a firm operation to illustrate some important microeconomics principles. The student assumes the role of a policymaker who decides how much to produce and sell by selecting one of four possible plant sizes under three different market conditions: pure competition, monopoly and oligopoly.

4. BARGAIN
   The user can choose to take the role of either the company or the union in settling a major contract dispute. The computer generates an economic situation which includes factors such as business climate, inflation rate, union and company size and strength, public opinion, and previous negotiating history. The user must propose and consider offers that include wage levels, vacation and holiday provisions, and insurance and pension contributions. The computer analyzes user decisions and responds as the opposition organization.

5. CITY GOVERNMENT
   vs. FIRE FIGHTERS
   This is a computer-based simulation of public employee collective bargaining. Student players have the option of assuming either a union or a management role and then matching wits with the computer. The issues over which bargaining takes place are wages, health insurance, and check-off. Industrial Relations Center, University of Minnesota.

6. DECIDE
   This is a decision making game based on a simple cobweb price adjustment model. The student plays the role of a farmer growing marijuana and must decide how much to grow (supply), and to adjust the level of production in response to certain random events beyond the grower control.

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7. DYNKEY

This program offers the student flexibility in devising a plan for helping the aggregate economy to reach the targets traditionally considered by the economic policy maker. The student can analyze the effects of alternate specifications of the components of the macro-model as well as the effects of alternative fiscal policies. The student is required to make decisions concerning fiscal policy, the foreign sector, one of three possible consumption functions, model changes, parameter changes, and variable changes.

8. ECK

This simulation is based on a simple aggregate demand model. It uses real historical data of the U.S. economy for the period between 1929-1940 to explain the great depression. The goal of the student is to attempt to avoid the occurrence of the great depression and to achieve a three percent rate of economic growth by using fiscal policy (i.e., by changing taxes and government spending).

9. ECM

This simulation is based on the equation of exchange and the quantity theory of money. It uses real historical data of the U.S. economy between 1929-1940. Data includes: money supply, money velocity, historical and simulated GNP. The goal of the students is to attempt to avoid the occurrence of the great depression and to achieve a three percent rate of economic growth by using monetary policy (i.e., changing the money supply).

10. ECON1

This program is based on a simple Keynesian model. The program contains six variables--net national product, consumption, investment, government spending, tax payments and disposable income. The student is required to answer questions regarding the government spending multiplier and tax multiplier. The student seeks to attain specified objectives through fiscal policy.

11. ECON2

Employment determination is added in this variation of the ECON model. The student's objective is to keep the unemployment rate within specified intervals. It can be done by controlling the level of government spending and tax payments. In addition to the six variables in ECON1, this program includes six new variables--capital stock, index of capital per employee, average output per employee, labor force, employment and unemployment. The student can see how unemployment is changed by uncontrolled forces and by fiscal policy.

12. ECON3

This program is designed to show how monetary and fiscal policy work in a Keynesian model. The student is required to keep the unemployment rate within specified intervals through changing the level of government spending, tax payments and nominal money supply. In addition to the twelve variables in ECON2, four new variables are added to this model--nominal money supply, rate of interest, real money supply and price index.

13. ECON4

The program shows how a feedback from the unemployment rate to demand (via prices) can alter the need for and effects of both monetary and fiscal policy. The controlled exogenous variables are--nominal money supply, government spending and tax payments. The rate of inflation is added to this program.

14. ECON5

The program provides the student with a problem of macroeconomic stabilization. Random disturbances are added to the consumption and investment equations. The student is required to stabilize the economy by controlling the level of tax payment.

15. ECONG

The program enables the user to select any specific program out of the five macroeconomic models ECON1-ECON5. The student is asked to choose the program which he or she wants to run.

16. ENERGY

The user can investigate different strategies for solving the energy crisis in this simulation. Production, consumption, and pollution levels can be altered in the area of industry, utilities, transportation, homes and business. The computer shows the results of alterations in graph form, and sometimes introduces "news flashes" concerning the development or discovery of new energy sources which will affect user decisions. Northwest Regional Education Lab documention available from MECC.

17. EXPINC

This program is a quiz for the student to review his/her understanding of the national income account. It provides the users with three choices for computing the GNP, NNP, national income, personal income and disposable income by using the income approach, the expenditure approach or both.

18. FIRM

In the game, FIRM, the student takes the role of a decision maker in a small firm which produces a homogeneous good. The student is required to choose the level of output which maximizes profits or minimizes losses.

19. FIRM2

This is a game of profit maximization or loss-minimization under perfect competition. The student plays the role of a wheat farmer faced with random events beyond his/her control which introduce elements of risk and uncertainties.

20. FISCAL

This program demonstrates the effect of fiscal policy in the economy. The students is asked to minimize the difference between potential and equilibrium output, in order to minimize the rate of unemployment and inflation. This is done by controlling the level of government expenditures and the basic tax level.

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21. GHETTO
This simulation is designed to sensitize the user to the emotional, physical, and social world of the disadvantaged inhabitant. The user takes on the role of an urban "ghetto" resident and experiences the economic pressures that drive people into crime, welfare, and community action. He must decide how to spend his time and deal with a variety of simulated events. CONDUIT documentation available from MECC.

22. GLOOM
The objective of GLOOM is to show the student how oligopolistic firms behave under various sets of legal constraints. The student's responsibility is to maximize the level of profit. All profits are paid out in dividends and stock prices are a function of dividends so that maximizing the present value of profits may be a reasonable objective.

23. GNP
This program simulates the calculation of Gross National Product. It allows the user to change: the average propensity to consume, personal and business tax rates, wage payments by private and public sectors, consumption, business activity, government spending, dividend rates, and the accumulated debt.

24. LIMITS
This program, based on MIT's Limits to Growth study, simulates the world's ecosystem stability over the coming 125 years. The user can compare growth trends of major ecosystem components as they interact based on current life styles with trends that would result if some components were altered. The user can control food supply, population, industrial output, pollution, and natural resources. Results of altering components are displayed in both graph and table form. A historical perspective on using technological models for managing social and economic policy can be found in the MECC Technocracy teacher resource booklet. The booklet explores a social movement from the 1920's and 30's that attempted to devise such a model prior to the advent of the computer age. Student activities are suggested, including some that utilize the modern-day LIMITS simulation. Huntington II documentation available from MECC. Technocracy booklet available from MECC.

25. MPG-I
In this game the student manages fiscal policy in a simple model of the product market with the goal of keeping aggregate demand at or near potential output.

26. MPG-II
The goal of this game is to minimize the difference between aggregate demand and potential output by student control of government expenditures and marginal tax rate.

27. MPG-III
This game incorporates a money market and a factor market with the product market and involves the student in simultaneous decisions about several policy variables in pursuit of multiple targets defined by the welfare function.

28. MPG-IV

The structure of the model for this economy is identical to that in MPG-III except policy decisions affect both the balance of trade and the balance of payments.

29. MPG-V

In this game the student is provided with increasingly complex goals beginning with a social welfare function in which the only argument is the deviation between actual and target income and concluding with a function involving deviations between actual and target rates of unemployment, inflation, and interest.

30. MPG-VI

This game is basically the same as MPG-V. It includes the nature and sequencing of policy goals, types of fiscal policy decisions available to the student, and the fixed interest rate regime; however a more realistic monetary sector is incorporated, teaching the standard theory of money supply and demand.

31. MASO1

This program provides the student with a review of a dynamic macroeconomic model. The student is asked to reshape the policy variables in such a way as to achieve the twin goals of full employment with price stability. This is done by changing the level of the money supply, government expenditures, taxes and transfer payments. However, the student should notice that some of the variables in the model affect other variables only after lag.

32. MASO2

The basic structure of this model is the same as MASO1. However, in this model such coefficients as the marginal propensity to consume, the interest-investment coefficient, the interest coefficient in the money demand equation and the growth rate of the labor force are random variables; that is, they will change from period to period. However, their average values are the same as in MASO1. The student's task is to direct the economy towards less unemployment and/or less inflation by controlling four policy variables--money supply, government expenditures, taxes and transfer payments.

33. MASO3

The game simulates the effectiveness of various policy actions which can reduce poverty. The student acts as an anti-poverty policy maker and his or her task is to allocate the budget to any combination of four policies--general increase in government expenditures, job development programs, anti-discrimination programs and direct income transfers--in order to reduce poverty.

34. MASO4

In the MASO4 game the student acts as a demand manipulator in the government. His or her task is to manipulate certain variables--consumer's income and price of goods in order to achieve specified objectives--equilibrium price and quantity of good.

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35. MICROMOD
This program includes three games entitled Pure Competition, Pure Monopoly, and Oligopoly. The games are played independently of one another. The student acts as a decision maker concerning product output and marketing. In pure competition, the decision variables are--the amount of product to supply, and the amount of money to spend advertising. The decision variables in pure monopoly and oligopoly are these two plus the price to change for the product. In addition, the student must select which of five short run production cost functions to use in each game by specifying the level of fixed cost in each round of play.

36. MILTON
The program puts the student in the position of monetary policy maker whose performance depends heavily on the money supply. The student is asked to control the money supply through three decision policy variables--open market operations, discount rate and ratio of required reserves to demand deposits--in order to keep actual NNP as close as possible to potential NNP.

37. MONEY
The program illustrates the effect of monetary policy in the economy. The objective of student is to minimize the difference between potential and equilibrium output, in order to maximize national welfare. The student can attain this through open market operations on the money stock.

38. MONOP
This game simulates one revolution around a monopoly board. The player makes decisions related to purchasing of certain properties when he/she stops at eight different places. Optimal performance requires an understanding of profit maximization based on information provided by cost and revenue schedules.

39. OPEN DOOR:
LEMONADE STAND
A computer simulation designed to teach grade school students about the business world. The game is intended to show how prices are determined, what to produce, how much to produce, and the impact of expenditures on advertising.

40. POLICY
In this simulation of the national political arena, the user (or groups of users) takes the role of one of six special interest groups, such as business, labor, or the military. Each group has a certain amount of influence which can be used to get particular policies passed. The computer keeps track of how each group has distributed its influence and which policies has enough influence behind them to pass, and then evaluates the state of the country as a function of those policies as measured by eighteen socio-economic indicators. Much activity between computer runs is devoted to personal bargaining among members of the special interest groups. Huntington II documentation available from MECC.

41. SELLAPPLES
Sellapples was designed for elementary students. Students experimentally determine the relationship between price and quantity sold. Students attempt to determine the relationship between price and income.

42. SELLPLANTS
Students are exposed to the terms price, advertising, expenses, income and profit. Students attempt to determine the relationship between price, advertising and income.

43. SELLLEMONADE
This program includes advertising, price, expenses, profit and assets. This program for elementary students represents the third level of progression in a four-part SELL series.

44. SELLBICYCLES
This is the fourth in a series of SELL programs developed by MECC for use by elementary students. This program includes profit, advertising, assets, inventory, production, as well as supply and demand.

45. SHIFTY
SHIFTY is a program that illustrates the effect on demand of changes in income level, price of substitutes, price of complementary goods, consumer tastes, and number of buyers. On the supply side it shows the effect of resource costs, price of substitute goods, price of complementary goods, taxes, and the number of sellers.

46. STOCKS
In this advanced simulation of the stock market, the user buys and sells shares in ten different companies based on price changes over time and a knowledge of the nature of each company. Up to fifteen users can enter decisions during the same run of the program, providing competition and affecting market changes independently.

47. SUMER
The user makes decisions about land use, food distribution, and new crop planting in this simulation of a small rural kingdom. The computer responds to these decisions by showing the effects on population change and agricultural yield.

48. SUMER2
In the SUMER2 game the student learns the characteristics of the resource allocation process in a planned (non-market) context subject to certain random factors.

49. USECON
This is a simulation of the U.S. economy in which the user can take both fiscal and monetary action to make actual GNP reach potential GNP. User decisions involve government spending, collection of business and personal taxes, reserve requirement, discount rate, and open market purchases. The computer sets the economic multiplier and records the results of user policies.

50. USNRG
This simulation allows the user to formulate public energy policy through the interaction of the U.S. economy, energy supply and demand, and the physical environment as represented by quality of air, land, and water. Individual and group values and goals as well as environmental processes all affect the choice of policy alternatives. CONDUIT documentation available from MECC.

51. UTIMAX
This is a game of utility maximization based on simple marginal rate of substitution model. The student makes decisions regarding the amount of beer, hotdogs, and peanuts to buy which in turn depend on income, utility schedules, and prices that are subject to changes.

52. WORLD2
This program simulates the behavior of a future world. The student is required to achieve a global equilibrium through five policy variables--population, environmental pollution, industrial output per capita, food per capita and national resources.

A BIBLIOGRAPHY OF COMPUTER-BASED LEARNING IN ECONOMIC EDUCATION

I. BIBLIOGRAPHIES

Barnes, O. Dennis. Computer-Assisted Instruction: A Selected Bibliography. Washington, D.C. Association for Educational Communications and Technology. March, 1972.

Beard, Marian. Computer-Assisted Instruction: The Best of ERIC, 1973-May 1976. Stanford University, California: ERIC Clearinghouse on Information Resources, August, 1976.

California State Universities and Colleges, "Computing in the Business Curriculum." Division of Information Systems, Los Angeles, October, 1974, 259 pps.

Deacon, Amos R.L., Jr. "A Selected Bibliography." In Simulation and Gaming: A Symposium, edited by Albert Newgarden. New York: American Management Association, 1961.

Duke, Richard D., and Schmidt, Allen H. Operational Gaming and Simulation in Urban Research, An Annotated Bibliography. East Lansing, Michigan: Institute for Community Development and Services, Michigan State University, 1965.

Friel, Susan and Roberts, Nancy. Computer Literacy Bibliography. Creative Computing, Vol. 6, No. 9, September, 1980, pp. 92-97.

Goldenberg, Albert L. A Beginner's Guide to Microcomputer Resources. Audiovisual Instruction, Vol. 24, No. 8, November, 1979, pp. 22-23.

Hall, Keith A. Computer-Based Education: The Best of ERIC June 1976-August 1980. Syracuse, New York: ERIC Clearinghouse on Information Resources, November, 1980.

Hartman, John H. Annotated Bibliography on Simulation in the Social Sciences. Ames, Iowa: Iowa Agricultural and Home Economics Experiment Station, Iowa State University, 1966.

Hartmann, John J. Annotated Bibliography on Simulation in the Social Sciences. Rural Sociology Report No. 53, Department of Sociology and Anthropology, Iowa State University, Ames, Iowa, 1966.

Helper, Molly. CONDUIT Catalog of Reviewed and Tested Curriculum Materials. CONDUIT, The University of Iowa, 1977, pp. 8-9.

Hoye, Robert E., and Wang, Anastasia C., ed. Index to Computer Based Learning. Englewood Cliffs, New Jersey: Educational Technology Publications, 1973, pp. 148-168.

IBM Corporation. Bibliography on Simulation. White Plains, New York, 1966.

Jensen, L. and White, M.J. Studies Related to the Simulation of International Political and Military Processes: Collection of Abstracts. Evanston, Illinois: Simulated International Processes, 1966.

Kraft, R., and Wensrich, C.J. Monte Carlo Methods: A Bibliography Covering the Period 1947-June 1961. Office of Technical Services Department of Commerce, Washington, D.C., 1961.

Lekan, Helen A., ed. Index to Computer Assisted Instruction. Boston, Massachusetts, Sterling Institute, 1970, pp. 55-60.

Lewis, Darrell R. and Orvis, Charles C. Research in Economic Education. Joint Council on Economic Education, 1971. (JCEE, 1212 Avenue of the Americas, New York, NY 10036) Bibliography of 133 papers.

Malcolm, D.G. "Bibliography on the Use of Simulation in Management Analysis." Operations Research, Vol. 8, 1960, pps. 169-177.

Naylor, Thomas H. "Bibliography 19. Simulation and Gaming." Computing Reviews, Vol 10, 1969, pps. 61-69.

Razik, Taher A., ed. Bibliography of Programmed Instruction and Computer Assisted Instruction. Englewood Cliffs, New Jersey: Educational Technology Publication, 1971.

Rushby, N.J. "Computer Based Learning in the Soviet Union - I." Imperial College Computer Centre, London University, (England) October, 1978, 16 pps.

------. Comp-Based Learning in Europe: A Bibliography London, England: Imperial College, January, 1978.

"Selective Bibliography on Simulation Games as Learning Devices." American Behavioral Scientist, Vol. 10, 1966, pp. 34-35.

Shubik, M. "Bibliography on Simulation, Gaming, Artificial Intelligence and Allied Topics." Journal of the American Statistical Association, Vol. 55, 1960, pps. 736-751.

VanDiver, G. and Love, R. Educators Handbook. Overland Park, Kansas, Vital Information, Inc., 1980.

------. Apple II/III Software Directory, Overland Park, Kansas, Vital Information, Inc., 1981.

Wang, Anastasia, ed. Index to Computer-Based Learning. 1976 ed. Milwaukee, Wisconsin: Instructional Media Laboratory, University of Wisconsin, 1976.

Werner, Roland, and Werner, Joan T. Bibliography of Simulations: Social Systems and Education. La Jolla, California: Western Behavioral Sciences Institute, 1969.

Wilson, Cathy R., and Schug, Mark C. A Guide to Games and Simulations for Teaching Economics. 3rd ed. New York: Joint Council on Economic Education, 1979.

Zuckerman, David W., and Horn, Robert S. The Guide to Simulations/ Games for Education and Training. Lexington, Massachusetts, Information Resources, Inc., 1973, pp. 161-176 and pp. 311-318.

II. BOOKS

Abelson, Robert P. "Simulation of Social Behavior." In Handbook of Social Psychology, 2nd Ed., Vol. 2, edited by Gardner Lindzey and Elliot Aronson. Reading, Mass.: Addison-Wesley Publishing Co., 1968.

------, "Simulation of Social Behavior." Handbook of Social Psychology. (Edited by G. Lindzey and E. Aronson) Center for the Advanced Study in the Behavioral Sciences, Palo Alto, California, 1966.

Abt, C.C. "Games for Learning," pp. 65-84 in S.S. Boocock and E.O. Schild (eds) Simulation Games in Learning. Beverly Hills, California: Sage Publications, 1968.

------. Serious Games. New York, Virginia Press, 1970.

Anderson, Richard C., and Biddle, W. Barry. "On Asking People Questions About What They are Reading," in Psychology of Learning and Motivation, Gordon H. Bower (Ed.), Vol. 9. New York: Academic Press, 1975.

Armsey, James W. and Dahl, Norman C. An Inquiry Into the Use of Instructional Technology (New York: The Ford Foundation, 1973), esp. pp. 58-70.

Attiyeh, Richard. "A Macroeconomic Model for the Classroom" in Developments in the Teaching of Economics, ed., by Keith G. Lumsden (Englewood Cliffs, N.J.: Prentice-Hall, 1967), pp. 65-73.

------. "Policy Making in a Simulated Environment," in Lumsden, K. (ed.), Recent Research in Economics, pp. 83-95. Englewood Cliffs, N.J., Prentice-Hall, 1970.

Bailey, Daniel E. (Ed.) Computer Science in Social and Behavioral Science Education. Englewood Cliffs, N.J.: Educational Technology Publications, 1978.

Bobrow, Davis B. and Schwarts, Judah L. Computer and the Policy-Making Community: Application to International Relations. Englewood Cliffs, N.J., Prentice-Hall, Inc., 1968.

Boocock, S.S. "An Experimental Study of the Learning Effects of Two Games with Simulated Environments": pp. 107-134 in S.S. Boocock and E.O. Schild (eds.) Simulation Games in Learning. Beverly Hills, CA: Sage Publications, 1968.

Borko, Harold. (Ed.) Computer Applications in the Behavioral Sciences. Prentice-Hall, Inc., Englewood Cliffs, N.J., 1962.

Bower, R.S. "Computer Time-Sharing and the Teaching of Economics," in Recent Reserach in Economics Education, ed., Keith G. Lumdsen. (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970), pp. 96-135.

Carlson, John A. Macroeconomic Adjustments. Holt Rinehart and Winston, Inc., 1970.

Campbell, J.P.; Dunnette, M.D.; Lawler, E.E.; and Weick, K.E. Managerial Behavior, Performance and Effectiveness, McGraw-Hill, 1970.

Chalmers, J.A. and Leonard, F.J. Economic Principles. MacMillan, 1971.

Chorafas, Dimitris N. Systems and Simulation. Academic Press, New York, 1965.

Coleman, J.S. "Mathematical Models and Computer Simulation," Handbook of Modern Sociology. (Edited by R.E.L. Faris) Rand McNally, Chicago, 1964.

------. "Academic Games and Learning," Invitational Conference on Testing Problems. Princeton, N.J.: Educational Testing Service, 1967.

------. "Social Processes and Social Simulation Games," pp. 29-52 in S.S. Boocock and E.O. Schild (eds.) Simulation Games in Learning. Beverly Hills, CA: Sage Publications, 1968.

Cook, T.M., and Russell, R.A. Introduction to Management Science, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1977.

Crook, M. STABIL: Economic Simulation. Palo Alto, California: The Scientific Press, 1975.

Davisson, William J. and Bonello, Frank J. Computer-Assisted Instruction in Economics Education: A Case-Study. Notre Dame: University of Notre Dame Press, 1976.

Dawson, George G. (ed.) Economic Education Experiences of Enterprising Teachers. Joint Council on Economic Education, 1972. (JCEE, 1212 Avenue of the Americas, New York, New York 10036) issued annually.

Digital Equipment Corp.; New York Polytechnic Institute, "Basic Simulation Programs," Vol. V and VI, Social Studies, Teacher Assistance. Developed by the Huntington Computer Project. Sponsoring Agency: National Science Foundation, Washington, D.C. Available From: Digital Equipment Corporation, Educational Marketing (5-2), 146 Main Street, Maynard, Massachusetts 01754.

Dunham, L.J. Testing Economic Hypothesis. Palo Alto, California: The Scientific Press, 1975.

Dutton, John M., and Starbuck, William H. (Eds.) Computer Simulation of Human Behavior. New York: John Wiley & Sons, Inc., 1971.

Evans, G.W.; Wallace, G.F.; and Sutherland, G.L. Simulation Using Digital Computers. Prentice-Hall, Englewood Cliffs, NJ, 1967 (CR 15, 113).

Farran, D.C. "Competition and Learning for Underachievers," pp. 191-204 in S.S. Boocock and E.O. Schild (eds.) Simulation Games in Learning. Beverly Hills, California: Sage Publications, 1968.

Ferguson, Richard L., and Novich, Melvin R. "Implementation of a Bayesian System for Decision Analysis in a Program of Individually Prescribed Instruction." American College Testing Program, Iowa City, Iowa. September, 1973. Available from: Publications Division, The American College Testing Program, P.O. Box 168, Iowa City, Iowa 52240.

Fiedler, F.E. A Theory of Leadership Effectiveness. New York: McGraw-Hill, 1967.

Fox, K.A. Intermediate Economic Statistics. John Wiley & Sons, Inc., New York, NY, 1968, p. 348.

Greenblat, C.S. "Teaching with Simulation Games: A Review of Claims and Evidence." In C.S. Greenblat and R.D. Duke (eds) Gaming-Simulation Rationale, Design and Applications, New York: John Wiley & Sons, 1975.

Greenblat, C.S.; and Duke, R.D. (Eds.) Gaming-Simulation: Rationale, Design and Applications. New York: John Wiley and Sons, 1975.

Greenlaw, P.S. and Frey, M.W. FINANSIM: A Financial Management Simulation. Scranton, PA: International Textbook, 1967.

Greenlaw, P.S. and Kniffin, F.K. MARKSIM: A Marketing Decision Simulation. Scranton, PA: International Textbook, 1964.

Guetzkow, Harold. (ed.) Simulation in Social Science. Prentice-Hall, Inc., Englewood Cliffs, NJ, 1962.

Guetzkow, Harold; Alger, C.F.; Brody, R.A.; Noel, R.C.; and Snyder, R.C. Simulation in International Relations: Developments for Research and Teaching. Englewood Cliffs, NJ: Prentice-Hall, 1963.

Guetzkow, Harold; Kotler, Phillip; and Schultz, Randall L. Simulation in Social and Administrative Science: Overview and Case Examples. Englewood Cliffs, NJ: Prentice-Hall, Inc., 1972.

Haldi, John; and Wagner, Harvey M. Simulated Economic Models. Homewood, Ill.: Richard Irwin, Inc., 1963.

Harter, Charlotte T., et al. "Audiovisual Materials for Teaching Economics," (3rd ed.), Joint Council on Economic Education. Available from: Joint Council on Economic Education, 1212 Avenue of the Americas, New York, NY 10036, 1980, 173 pps.

Hoggatt, Austin C. and Balderston, F.E. (eds.) Symposium on Simulation Models. Southwestern Publishing Co., Cincinnati, 1963.

Hollingdale, S.H. (eds.) Digital Simulation in Operational Research. American Elsevier Publishing Co., New York, 1967. (CR 12, 867).

Huntington, John F. Computer-Assisted Instruction Using BASIC. Englewood Cliffs, NJ: Educational Technology Publications, 1979.

Johoda, M. and Warren, N. Attitudes. Baltimore: Penguin, 1966.

Kelley, Allen C. "The Economics of Teaching: The Role of TIPS," in Recent Research in Economics Education, ed. by Keith G. Lumsden Englewood Cliffs, N.J.: Prentice-Hall, 1970, pp. 44-66.

Kibbee, J.M.; Craft, C.J.; and Nanus, Burt. Management Games. Reinhold Publishing Co., New York, 1961.

Klein, L.R. Introduction to Econometrics. Prentice-Hall, 1965

Klein, L.R.; Evans, M.K.; Hartley, M. Econometric Gaming. New York: Macmillan Company, 1969.

Leamer, Leonard. The Economist as Teacher. Monograph C-13, South Western Publishing Co.

Lee, S.M. Goal Programming for Decision Analysis. Philadelphia, PA: Auerbach Publishers, Inc., 1972, pp. 140-157.

Lindert. Macro: A Game of Growth and Policy. Holt Rinehart and Winston, 1970.

Luce, R.D. and Raiffa, H. Games and Decisions. New York: John Wiley, 1957.

Lumsden, Keith G. (Ed.) New Developments in the Teaching of Economics. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967.

------. Recent Research on the Teaching of Economics. Prentice-Hall, 1969.

------. "Recent Research in Economics Education," Stanford University, California, 1970. Sponsoring Agency: General Electric Foundation, Ossining, N.Y., Available from: Prentice-Hall, Inc., Englewood Cliffs, New Jersey 07632.

McKenney, J.L. and Dill, W.R. "The Effects of Team Assignment and Faculty Boards on Student Attitudes and Learning," pp. 217-231 in S.S. Boocock and E.O. Schild (Eds.) Simulation Games in Learning. Beverly Hills, CA: Sage Publications, 1968.

McMillan, Claude, and Gonzalez, Richard F. Systems Analysis. Richard D. Irwin, Inc., Homewood, IL, 1965.

Martin, Francis F. Computer Modeling and Simulation. Wiley & Sons, New York, 1968.

Meier, R.C.; Newell, W.T.; and Pazer, H.L. Simulation in Business and Economics, Prentice-Hall, 1969.

Milners, S. (Ed.) Topics in Instructional Computing (Volume I); Teacher Education. New York: Association for Computing Machinery, 1975.

Mize, Joe H.; and Cox, J. Grady. Essentials of Simulation. Prentice-Hall, Englewood Cliffs, N.J., 1968, (CR 15,731).

Naylor, Thomas H. Computer Simulation Experiments with Models of Economic Systems. New York: John Wiley & Sons, Inc., 1971.

Naylor, T.H.; Byrne, E.T.; and Vernon, J.M. Introduction to Linear Programming: Methods and Cases. Belmont, CA: Wadsworth Publishing Company, Inc., 1971.

Naylor, Thomas H.; Balintfy, Joseph L.; Burdick, Donald S.; and Chu, Kong. Computer Simulation Techniques. Wiley & Sons, New York, 1966. (CR 11, 103).

Osgood, C.E. et. al. The Measurement of Meaning. Urbana: University of Illinois Press, 1957.

Pindyck, Robert S.; and Rubinfeld, Daniel L. Econometric Models and Economic Forecasts. New York: McGraw-Hill Book Company, 1981, pp. 319-456.

Poole, T.; and Szymankiewicz, J. Using Simulation to Solve Problems. London: McGraw-Hill Book Company (UK) Limited, 1977.

Porter, L.W.; and Lawler, E.E. Managerial Attitudes and Performance. Irwin-Dorsey, Homewood, Illinois, 1968.

Radov, K.B. "Teaching Economics by Computer". New Developments in the Teaching of Economics, K.G. Lumsden (Ed.), Prentice-Hall, 1967, pp. 247-261.

Rapoport, A. Fights, Games and Debates. Ann Arbor: University of Michigan Press, 1960.

Richards, M.D. and Greenlaw, P.S. Management: Decisions and Behavior. Homewood, IL: Richard D. Irwin, 1972.

Rodger, T.S. Computer-Assisted Instruction: CAI and the Teaching of Economics in New Developments in the Teaching of Economics, ed. Keith G. Lumsden, Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1967.

Rosenfeld, F.N. "The Educational Effectiveness of Simulation Games: A Synthesis of Recent Findings." In C.S. Greenblat and R.D. Duke (Eds.) Gaming Simulation: Rationale, Design and Applications. New York: John Wiley and Sons, 1975.

Ryan, T.A.; Joiner, B.L.; and Ryan, B.F. MINITAB: Student Handbook. North Scituate, Massachusetts: Duxbury Press, 1976.

Schmalensee, R. Applied Microeconomics--Problems in Estimation, Forecasting, and Decision Making. San Francisco, California: Holden-Day, Inc., 1973.

Schellenberger, R. MANSYM: A Dynamic Simulator. Dubuque, Iowa: Brown, 1965.

Seelenfreund, Alan. "Computer Experiments in Marginal Analysis," in Recent Research in Economics Education, ed. by Keith G. Lumsden, Englewood Cliffs, N.J.: Prentice-Hall, 1970, pp. 136-157.

Shubik, M. "Game Theory and the Study of Social Behavior: An Introductory Exposition," pp. 3-78 in M. Shubik (Ed.) Game Theory and Related Approaches to Social Behavior. New York: John Wiley, 1964.

Sterling Institute, "Computer Managed Instructional System. Economic Analysis Course." Sponsoring Agency: Naval Academy, Annapolis, MD.; Office of Education (DHEW), Washington, D.C.; Available From: Educational Technology Center/Sterling Institute, The Watergate, 2600 Virginia Avenue, N.W., Washington, D.C. 20037; 28 July, 1969, 36pps.

Thorelli, Hans B.; and Graves, Robert L. International Operations Simulation. The Free Press of Glencoe, New York, 1964.

Tocher, K.D. The Art of Simulation. D. Van Nostrand Co., Princeton, N.J., 1963.

Treyz, George I. Computer Problem Booklet for Economics. London: The MacMillan Company Collier-MacMillan Limited, 1969.

------. Computer Problem Kit for Economics. New York: MacMillan Company, 1969.

Vance, S. Management Decision Simulation. New York: McGraw-Hill, 1960.

Vroom, V.H. Work and Motivation. John Wiley, New York, N.Y., 1964.

Wilson, Cathy R., and Schug, Mark C. "A Guide to Games and Simulations for Teaching Economics," (3rd Ed.), Joint Council on Economic Education. Available From: Joint Council on Economic Education, 1212 Avenue of the Americas, New York, N.Y. 10036, 1979, 91 pps.

III. PERIODICALS

Addis, G. H. "The Use of Programmable Calculators in the Teaching of Economics, Part 1," Economics, Vol. 14, Part 1; No. 61, (Spring, 1978), pp. 3-8.

Aguirre, Edward, et. al. "Educator Reaction to 'Via Technology'," Phi Delta Kappan, Vol. 58, No. 6, (February, 1977), pp. 454-459.

Anderson, Thomas H.; Anderson, Richard C.; Dalgaard, Bruce R.; Wietecha, Edward J.; Biddle, W. Barry; Paden, Donald W.; Smock, H. Richard; Alessi, Stephen M.; Surber, John R.; and Klemt, Laura. "A Computer Based Study Management System," Educational Psychologist, 11 (1974), pp. 36-45.

Anderson, Thomas H.; Anderson, Richard C.; Dalgaard, Bruce R.; Paden, Donald W.; Briddle, W. Barry; Surber, John R.; and Alessi, Stephen. " An Experimental Evaluation of a Computer Based Study Management System," Education Phychologist, 11 (1975), pp. 184-190.

Ashburn, Arnold G., "Use of the Computer to Increase Individualized Effort," Improving College and University Teaching, Vol. 25, No. 1, (Winter, 1977), pp. 57-58.

Asher, Joe. "What Bank Schooling Can Be in the Computer Age." Banking (Journal of the American Bankers Association) (August, 1975).

Attiyah, R. E.; Back, G. Land; and Lumsden, K. G. "The Efficiency of Programmed Learning in Teaching Economics: The Results of a Nationwide Experiment," American Economic Review, May 1969.

Auyer, Stephen E. "Simulation of Competitive Business," Creative Computing Vol. 7, No. 3, (March, 1981), pp. 146-157.

Babb, E. M.; Leslie, M. A.; and Van Slyke, M. D. "The Potential of Business-Gaming Methods in Research," Journal of Business, Vol. 39, No. 4 (October, 1966), pp. 465-472.

Bass, B.M. "Business Gaming for Organizational Research," Management Science, Vol. 10, No. 3 (April, 1964), pp. 545-556.

Bhaskar, K. "Computer-Aided Instruction for Administrative Forms," Journal of Technological Horizons in Education, Vol. 5, No. 4, (July-August, 1978), pp. 28-31.

Biachhi, L. L. "An Analysis of Computer-Assisted Instruction in Economics," Collegiate News and Views, Vol. 32, No. 3, (Spring, 1979), pp. 19-23.

Boehlje, Michael, and Fisher, Glen. "A Competitive Management Game for Non-Metropolitan Commercial Banks," Journal of Bank Research, (Spring, 1976).

------, "Educational Programs for Rural Bankers' Use of a Management Game," Economic Report No. 8, Iowa State University, Ames, (September, 1976).

Bonello, Frank J.; Davisson, William I.; Jameson, Kenneth; and Navratil, Frank J. "Economics and Methodology: A Freshman Course," Economic Education Experiences of Enterprising Teachers, Vol. 11 (New York: Joint Council on Economic Education, 1974), pp. 95-101.

Boocock, Sarane S. "An Experimental Study of the Learning Effects of Two Games with Simulated Environments." The American Behavioral Scientist 10 (October, 1966), pp. 8-17.

Boocock, Sarane S., and Coleman, J.S. "Games with Simulated Environments in Learning," Sociology of Education (Summer).

Booms, Bernard H. "An Experiment in Computer-Managed Instruction," Economic Education Experiences of Enterprising Teachers, Vol. 10 (New York: Jount Council on Economic Education, 1973), pp. 86-91.

Booms, Bernard H., and Kaltreider, D. Lynne. "Computer-Aided Instruction for Large Elementary Courses," American Economic Review, (May, 1974) pp. 408-413.

Borak, Miroslav and Borakova, Helena. "Group Solution of Examples--Application to a "Unitutor" Programme," Convergence, Vol. 7, No. 2, (1974), pp. 27-32.

Bork, Alfred. "Learning Via Computer Graphics," NATO Advanced Study Institute, Louvian-La-Neuve, Belgium, (1 July, 1976).

Bower, R.S. "Discussion of Dolbear, Attiyeh and Brainard's Paper--A Simulation Policy Game for Teaching Economics." American Economic Review, Vol. 58, No. 2, (May, 1968), pp. 485-487.

Bray, D.W., and Grant, D.L. "The Assessment Center in the Measurement of Potential for Business Management," Psychological Monographs, Vol. 80, No. 17, (Whole No. 625), 1966.

Butler, Tommie, et al. "Basic Business and Economics: A Secondary School Adventure in the Free Enterprise System," Business Education Forum, Vol. 32, No. 2, (November, 1977), pp. 20, 22-23.

Calkins, Ralph N. "A Computerized Model of Exchange as an Aid to Teaching Price Theory," Journal of Economic Education, 1 (Spring, 1970), pp. 97-103.

Cangelosi, V.E., and Dill, W.R. "Organizational Learning: Observations Toward a Theory," Admin. Sci. Q. 10 (September, 1969), pp. 175-203.

Chartier, M.R. Toward a Theoretical Model of Learning as it is Related to Simulation Games with Discussion, (ERIC Document Reproduction Service No. ED 088417), 1974.

Cherryholmes, C. "Some Current Research on Effectiveness of Educational Simulations: Implications for Alternative Strategies," American Behavioral Scientist, Vol. 10, No. 2 (October, 1966), pp. 4-7.

------. "Simulating International Relations in the Classroom," in J.M. Becker and H.D. Mehlinger (eds.) International Dimensions in the Social Studies, 1968, pp. 173-190.

Chiesel, Newell. "The Interactive Case: Computerized Technique to Teach the Business Case Method," Technological Horizons in Education, Vol. 6, No. 5, (September, 1979), pp. 38-39.

Chizmar, J.F., et al. "Assessing the Impact of an Instructional Innovation on Achievement Differentials: The Case of Computer-Assisted Instruction," Journal of Economic Education, Vol. 9, No. 1, (Fall, 1977) pp. 42-46.

Clarkson, G.P.E., and Simon, J.A. "Simulation of Individual and Group Behavior." American Economic Review 50 (December, 1960) pp. 920-932.

Clayton, G.E., and Hoyt, D.R. "A Forecasting Simulation for a Basic Economics Course." Collegiate News and Views, Vol. 31, (Winter, 1978), pp. 5-9.

Cohen, K.J., and Rhenman, E. "The Role of Management Games in Education and Research," Management Science, Vol. 7, No. 2 (January, 1961) pp. 131-166.

Cohen, K.J. and Cyert, Richard M. "Computer Models in Dynamic Economics." Quarterly J. Economics 75 (February, 1961) pp. 121-127.

Cohen, K.J. and Doppelt, N. "The Acquisition of Experience in a Complex Management Game." Management Science 10 (October, 1963) pp. 30-46.

Couger, J. Daniel, (ed.). "Computing Newsletter for Schools of Business," Computing Newsletter, Vol. 6, No. 1, September 1972, Vol. 6, No. 5, January 1973. 25 pps. School of Business Administration, Colorado University, Colorado Springs.

Counts, George. "The Creation and Solution of Unique Statistical Problems for Each Student," Journal of Experimental Education, Vol. 37, No. 3, (Spring, 1969) pp. 17-20.

Cox, R. "Computer-Assisted Instruction and Student Performance in Macroeconomic Principles." Journal of Economic Education, Vol. 6 (Fall, 1974) pp. 29-37.

Craft, L.J., and Stewart, L.A. "Competitive Management Simulation," Journal of Industrial Engineering, Vol. 10, No. 5 (September-October, 1959) pp. 362-363.

Davis, J.H., and Restle, F. "The Analysis of Problems and a Prediction of Group Problem Solving," Journal of Abnormal and Social Psychology Vol. 66, No. 2 (February, 1963) pp. 103-116.

DeFelice, F. "Towards a Complete CAI Business and Economics Curriculum," Journal of Educational Technology Systems, Vol. 9, No. 1, (1980-81) pp. 29-35.

Dill, W.H.; Hoffman, W.; Leavitt, H.J.; and O'Mara, T. "Experiences with a Complex Management Game," California Management Review, Vol. 3, No. 3 (Spring, 1961)pp. 38-51.

Dill, W.R., and Doppelt, N. "The Acquisition of Experience in a Complex Management Game," Management Science, Vol. 10, No. 1 (October, 1963) pp. 30-46.

Dolbear, F.T., Jr.: Attiyeh, R.E.; and Brainard, W.C. "A Simulation Policy Game for Teaching Macroeconomics," American Review 58 (1968) pp. 458-468.

Eliason, A. "A Study of the Effects of Quantitative Training." Academy of Management J. 15 (June, 1972) pp. 147-158.

Emery, D. and Enger, T.P. "Computer Gaming and Learning in an Introductory Economics Course." Journal of Economic Education, Vol. 3 (Spring, 1972) pp. 77-85.

Fabun, Don (ed.) "On Education," Kaiser Aluminum News, Vol. 25, No.1, (1967); 31 pps. Available from: Kaiser Aluminum and Chemical Corporation, 300 Lakeside Drive, Oakland, California 94604.

Falero, Frank. "Macroeconomic Development Game," Economic Education Experiences of Enterprising Teachers, Vol. 9, (New York: Joint Council on Economic Education, 1972) pp. 90-93.

Fauley, Franz E. "Computer Based Education," Training and Development Journal, Vol. 34, No. 11, (November, 1980) pp. 20-21.

Fels, Rendigs, and Starleaf, D.R. "Controlled Experiments in Teaching Techniques," Southern Economic Journal 30 (July, 1963) pp. 68-73.

Fletcher, J.L. "Book Review of Simulation Games in Learning." Simulation and Games 1 (June, 1970) pp. 217-220.

------. "The Effectiveness of Simulation Games as Learning Environments: A Proposed Program of Research," Simulations and Games, Vol. 2, No.4 (December, 1971) pp. 425-4.

------. "Simulation as Research Tools," Simulations and Games, Vol. 4, No. 3 (September, 1973) pp. 341-344.

Fletcher, J.D. "Modeling the Learner in Computer-Assisted Instruction," Journal of Computer-Based Instruction, Vol. 1, No. 4 (1975) pp. 118-126.

Gaines, W.G. "Toward More Systematic Evaluation of Classroom Simulations and Games," Simulations and Games, Vol. 4, No. 2 (June, 1973) pp. 241-244.

Gentry, James A. "Computerized Simulation Models: An Educational Experiment," Journal of Economic Education, Vol. 6, No. 1, (Fall, 1974) pp. 38-46.

Graen, G. "Instrumentality Theory of Work Motivation: Some Experimental Results and Suggested Modifications," Journal of Applied Psychology Monograph, Vol. 53, No. 2 (April, 1969).

Graham, R.G., and Gray, C.F. Business Games Handbook, American Management Association, 1969.

Greenlaw, P.S., and Kniffin, F.W. Marksim: A Marketing Decision Simulation, International Textbook, 1964.

Greenlaw, P.S., and Wyman, F. Paul. "The Teaching Effectiveness of Games in Collegiate Business Courses," Simulations and Games, Vol. 4, No. 3 (September, 1973) pp. 259-29.

Haley, Bernard F. Experiments in the Teaching of Basic Economics. New York: Joint Council on Economic Education, 1966, pp. 19-20.

Henderson, B.G., and Gaines, W.G. "Assessment of Selected Simulations and Games for the Social Studies." Social Education, Vol. 35, No. 5, 1971, pp. 508-513.

Henry, Mark. "The Effects of Computer-Aided Instruction on Learning and Attitudes in Economic Principles Courses: Revised Results," Journal of Economic Education, Vol. 11, No. 1, (Fall, 1979) pp. 42-44.

Henry, M., and Ramsett, D. "The Effects of Computer-Aided Instruction on Learning and Attitudes in Economic Principles Courses," Journal of Economic Education, Vol. 10, No. 1, (Fall, 1978) pp. 28-34.

Hermann, Charles F. "Validation Problems in Games and Simulation With Special Reference to Models of International Politics." Behavioral Science 12 (May, 1967) pp. 216-231.

Hoggatt, Austin C. "Measuring the Cooperativeness of Behavior in Quantity Variation Duopoly Games." Behavioral Science (March, 1967) pp. 109-121.

Johnson, Alan. ""Turn-On" to Management," Balance Sheet, Vol. 52, No. 4 (December, 1970 - January, 1971), pp. 164-65.

Johnson, James W. "Getting From Here to There: The Status of Instructional Computing in Higher Education." T.H.E. Journal (Technological Horizons in Education), Vol. 7, No. 5 (November, 1980) pp. 48-53.

Joseph, Myron L. "Role Playing in Teaching Economics," American Economic Review 55 (1965) pp. 556-565.

------. "Game and Simulation Experiments," Journal of Economic Education 1 (Spring 1970) pp. 91-96.

Kahn, H., and Mann, I. "War Gaming." Publication P-1167, July, 30, Santa Monica, California: Rand Corporation, 1957.

Kaufman, Frank L., "An Empirical Study of the Usefulness of a Computer-Based Business Game," Journal of Educational Data Processing, Vol. 13 No. 4, (1976) pp. 13-22.

Keating, B. "Simulation Gaming in the Managerial Economics Course," Journal of Economic Education," Vol. 10, (Spring 1979) pp. 65-67.

Kelley, A.C. "An Experiment with TIPS: A Computer-Aided Instructional System for Undergraduate Education," American Economic Review 60 (May, 1970) pp. 346-369.

------. "TIPS and Technical Change in Classroom Instruction," American Economic Association 71 (1970) pp. 422-78.

------. "TIPS and Technological Change in Classroom Instruction," American Economic Review 62 (1972) pp. 428-72.

------. "On the Appraisal of Technical Change in Classroom Instruction," Economic Education Experiences of Enterprising Teachers, Vol. 10, (New York: Joint Council on Economic Education, 1973) pp. 78-85.

Kelley, Allen C. "Individualizing Instruction Through the Use of Technology in Higher Education," Journal of Economic Education 4 (Spring 1973) pp. 77-89.

Kennedy, J.L. "The System Approach: A Preliminary Exploratory Study of the Relation Between Team Composition and Financial Performance in Business Games," Journal of Applied Psychology 55 (February, 1971) pp. 46-49.

Kibbee, J.M. "Dress Rehersal for Decision Making: The Growing Use of Business Games," Management Review, Vol. 48, No. 2 (February, 1959) pp. 4-8 and 71-73.

Kotler, P., and Schultz, Randall L. "Marketing Simulation, Review and Prospects." Journal of Business , Vol. 43, No. 3 (July, 1970) pp. 237-295.

Kraft, Arthur, and Kraft, John. "Computer Applications in Teaching Econometrics," Decision Sciences, Vol. 4, (1973) pp. 284-294.

Lewin, A.Y., and Weber, W.L. "Management Game Teams in Education and Organization Research: An Experiment on Risk Taking." Academy of Management Journal 12 (March, 1969) pp. 49-57.

Lewis, Darrell R., et al. Educational Games and Simulations in Economics (New York: The Joint Council on Economic Education, 1974).

Lewis, Jennifer and Randall, K.V. "Some Developments in Computer-Based Materials for Economic Teaching," Economics, Vol. 11, Part 1, (Spring, 1975) pp. 45-46.

Lumsden, Keith G. "The Promises and Problems of Games and Simulation," Journal of Economic Education 1 (Spring, 1970) pp. 85-90.

Magrabi, Frances M. "Computer Use in Home Economics: Workshop Explores the Possibilities," Journal of Home Economics, Vol. 64 No. 8, (November, 1972) pp. 25-29.

Masuo, Diana M., and Furuta, Burt A. "Interactive Effects of Prior Knowledge of "Credit Costs" Concepts and Math Skills and Mode of Programmed Instruction," Journal of Computer-Based Instruction Vol. 8, No. 1, (August, 1981) pp. 9-12.

McKay, W. "Computer-Directed Instructional Games." Audiovisual Instruction, Vol. 14, No. 4, (1969) pp. 37-40.

McKenney, J.L. "An Evaluation of a Business Game in an MBA Curriculum," Journal of Business, Vol. 35, No. 3 (July, 1962) pp. 278-286.

------. "An Evaluation of a Decision Simulation as a Learning Environment," Management Technology 4 (May, 1963) pp. 56-67.

McKenney, J.L., and Dill, W.R. "Influences on Learning in Simulation Games," American Behavioral Scientist 10 (October, 1966) pp. 28-32.

McKenney, J.L. Simulation Gaming for Management Development. Cambridge, Massachusetts: Harvard University Press, 1967.

McLagen, P.A., and Sandborgh, R.E. "CAI's Past: We've Come a Long Way," Training, (September, 1977) p. 52.

Martin, E.W., Jr. "Teaching Executives Via Simulation," Business Horizons Vol. 2, No. 2, (Summer, 1959) pp. 100-109.

Mazur, Allan. "Simulation and Games Forum," "Simulation Validity," Simulations and Games, vol. 4, No. 3, (September, 1973) pp. 344-5.

Miller, G.G. "Some Consideration in the Design and Utilization of Simulation for Technical Training Lowery Air Force Base: Denver, Colorado." Air Force Human Resource Laboratory, (ERIC Documen Reproduction Service No.Ed. 097 919), (August, 1974)

Moncreiff, Bruce. "The Sumerian Game: Teaching Economics with a Computerized P.I. Program." Programmed Instruction, (February, 1965) p. 4 (5).

Moore, Charles M. "Computer Assisted Laboratory Experiments for Teaching Business and Economic Statistics," International Journal of Mathematical Education in Science and Technology, Vol. 5, No. 4, (October-December, 1974) pp. 713-716.

Moore, L. "Business Games vs. Cases as Tools of Learning." Training and Development Journal 21 (October, 1967) pp. 13-23.

Morrison, James L. "Project B.E.A.T.: Business Education Alternatives for Teaching," Business Education Forum, Vol. 32, No. 7, (April, 1978) pp. 5-6, 9, 11.

------. "Computer Alienation vs. Proper Preparation," Journal of Business Education, Vol. 50, No. 1, (October, 1974), pp. 13-14.

Muscat, Eugene. "Microcomputers in Business Education," Business Education World, Vol. 60, No. 4, (March-April, 1980), pp. 10-11.

Myron, J.L. "Role Playing in Teaching Economics," American Economic Review, LV (May, 1965), pp. 556-565.

Nanus, B. "Management Games--An Answer to Critics." Journal of Industrial Engineering 13 (November-December, 1962), p. 467.

Naylor, Thomas H., and Finger, J.M. "Verification of Computer Simulation Models." Management Science 14 (October, 1967), pp. 92-101.

Nealey, S.M., and Blood, M.R. "Leadership Performance of Nursing Supervisors at Two Organizational Levels," Journal of Applied Psychology, Vol. 52, No. 5 (October, 1968), pp. 414-422.

Nealey, S.M., and Fiedler, F.E. "Leadership Functions of Middle Managers," Psychological Bulletin, Vol. 70, No. 5 (November, 1968), pp. 313-329.

Norris, William C., "Via Technology to a New Era in Education," Phi Delta Kappan, Vol. 58, No. 6, (February, 1977), pp. 451-453.

Paden, Donald W., and Barr, Michael D. "Computer Assisted Instruction in an Elementary College Economics Course," Computers and Education, Vol. 4, No. 4 (1980), pp. 259-267.

Paden, Donald W., et. al. "A Decade of Computer Assisted Instruction," Journal of Economic Education, Vol. 9, No. 1, (Fall, 1977), pp. 14-20.

Pearce, John A. "Developing Business Policy Skills: A Report on Alternatives," Journal of Educational Technology Systems, Vol. 7, No. 4, (1978), pp. 361-371.

Peters, Alice D. "A Lot of Computer for a Little Money," School Management, Vol. 17, No. 8, (October, 1973), pp. 15-17.

Philippatos, G.C., and Moscato, D. "Effects of Constrained Information on Player Decisions in Experimental Business Simulation: Some Empirical Evidence." Journal of Association for Computing Machinery 18 (January), pp. 94-104.

Raia, A.P. "A Study of the Educational Value of Management Games." Journal of Business 113 (July, 1966), pp. 339-352.

Read, Pansy B., and Olivieri, Dorothy. "High School Students Exposed to a Computer," Balance Sheet, Vol. 56, No. 3, (November, 1975), pp. 105-106, 142.

Ricciardi, F.M.; Craft, C.J.; Malcolm, D.M.; Bellman, R.; Clark, C.; Kibbee, J.M.; and Rawdon, R.H. Top Management Decision Simulation: The AMA Approach, American Management Association, 1957.

Rives, J.M. "Teaching Managerial Economics With a Computer Simulation Model." Journal of Economic Education, Vol. 7 (Spring, 1976), pp. 133-134.

Robert, A.L. "What's Wrong With Business Games?" Journal of Industrial Engineering 13, 6 (November-December, 1962), p. 465.

Robichek, Alexander; Haley, Charles; and Niebahr, David. "Stanford Bank Management Simulator," Graduate School of Business, Stanford University, 1972.

Robinson, J.A.; Anderson, L.F.; Herman, M.G.; and Snyder, R.C. "Teaching with International Simulation and Case Studies." American Political Science Review 60 (March, 1966), pp. 53-65.

Robinson, J.N. "Are Economic Games and Simulations Useful? Some Evidence From an Experimental Game," Simulation and Games, Vol. 9 (March, 1978), pp. 3-21.

Robinson, J.N. "The Theory and Practice of Economics: Can a Computer Help to Link the Two?" Programmed Learning and Educational Technology, Vol. 14, No. 3, (August, 1977.), pp. 207-212.

------. "The Reading University Macro-Economic Games," Economics, Vol. 10, No. 6 (Winter, 1974), pp. 383-388.

Robinson, Randall.S., "BANKMOD: An Interactive Simulation Aid for Bank Financial Planning." Journal of Bank Research, Vol. 4, No. 3 (Autumn, 1974), pp. 212-224.

Ross, Thomas. "MACROMOD: Computer Simulation for Introductory Economics," Community College Social Science Journal, Vol. 1, No. 2, (1977), pp. 26-29.

Sawyer, John A. "The TREE System as a Teaching Aid in Macroeconomics and Econometrics," Computers and Education, Vol. 5, No. 2, (1981), pp. 101-110.

Scalzo, Frank and Hughes, Rowland. "Integration of Packaged Computer Programs into an Undergraduate Introductory Statistics Course," Journal of Computer-Based Instruction, Vol. 2, No. 3, (February, 1976), pp. 73-79.

Sheer, L.A., et. al. "Design and Tests of Computer-Furthered Instruction," International Journal of Man-Machine Studies, Vol. 6, No. 1, (January, 1974), pp. 105-124.

Shubick, M. "Bibliography on Simulation, Gaming, Artificial Intelligence and Allied Topics." Journal of the American Statistical Association, (December, 1960), pp. 736-751.

Skavaril, Russell V. "Computer-Based Instruction of Introductory Statistics," Journal of Computer-Based Instruction, Vol. 1, No. 1, (August, 1974), pp. 32-40.

Skinner, S.J., and Grimm, J.L., "Computer-Assisted Instruction Case Study: The Introductory Marketing Course," Educational Technology, Vol. 19, No. 7, (July, 1979), pp. 34-36.

Soper, J.C. "Computer Assisted Instruction in Economics - A Survey." Journal of Economic Education, Vol. 6, (Fall, 1974), pp. 5-28.

Spirer, Herbert F. "Mini-Simulation--A Remote Computer Terminal Teaching Aid for Statistics," Journal of Business Education, Vol. 47, No. 5, (February, 1972), pp. 206-207.

Stanford, R.A. "Ceteris Paribus Methodology and Computerized Economics - Business Models." Journal of Economic Education, Vol. 4, (Fall, 1972), pp. 23-29.

Starbuck, W.H., and Kobrow, E. "The Effects of Advisors on Business Game Teams." Americal Behavioral Scientist 10 (November, 1966), pp. 28-30.

Steinmetz, L., and Patten, R. "Enthusiasm and Learning: The Results of Game Training." Training and Development Journal 21 (April, 1967), pp. 26-34.

Sterrett, A., and Karian, Z.A., "A Laboratory for an Elementary Statistics Course," American Mathematical Monthly, Vol. 85, No. 2, (February, 1978), pp. 113-116.

Stocker, H. Robert. "Computer-Assisted Instruction," Delta Pi Epsilon Journal, Vol. 14, No. 3, (May, 1972), pp. 15-24.

Stronge, William B. "A Simulation Model Introducing Keynesian Economics," Simulation and Games, Vol. 4, No. 4, (December, 1973), pp. 411-428.

Sullivan, James. "Economic Laboratory at UCSB," Simulation and Games, Vol. 1, (1970), pp. 81-91.

Suppes, P. "Computer-Assisted Instruction at Stanford," Men and Computer, Basel: Karger (1972).

Suppes, Patrick, and Maken, Elizabeth. "The Historical Path From Research and Development to Operational Use of CAI," Educational Technology (April, 1978), pp. 9-12.

Swaminathan, H., et al. "A Bayesian Decision - Theoretic Procedure for Use With Criterion - Referenced Tests," Journal of Educational Measurement, Vol. 12, No. 2, (Summer, 1975), pp. 87-98.

Tanis, Elliot A. "Mathematical Probability and Statistics Computer Laboratory," International Journal of Mathematical Education in Science and Technology, Vol. 5, No. 4, (October-December, 1974), pp. 717-722.

Treyz, George I. "Active Programming and Computer Simulations by Intermediate Macroeconomic Theory Students," Economic Education Experiences of Enterprising Teachers, Vol. 8 (New York: Joint Council on Economic Education, 1971), pp. 80-82.

------. "The Use of Computers in Economic Education: Comment." Journal of Economic Education, Vol. 2, (Spring, 1971), pp. 175-176.

Tsai, San-Yun W., and Pohl, Norval F. "Computer-Assisted Instruction Augmented with Planned Teacher/Student Contacts," Journal of Experimental Education, Vol. 49, No. 2, (Winter, 1980), pp. 120-126.

Vance, S., and Grey, C. "Use of a Performance Evaluation Model for Research in Business Gaming." Academy of Management Journal 10 (March, 1967), pp. 2-37.

VanSickle, R.L. "Instructional Simulation of Economic Processes," Peabody Journal of Education, Vol. 57, (April, 1980), pp. 178-182.

Vrooman, D I. "The Use of Computers in Economic Education: A Further Comment." Journal of Economic Education, Vol. 5, (Spring, 1974), pp. 35-137.

Wallace Ivan G. "Computers in the Typing Class?" Business Education Forum, Vol. 36, No. 2, (November, 1981), pp. 27-28.

Wallach, M. et. al. "Group Influence on Individual Risk Taking." Journal of Abnormal and Social Psychology 65 (August, 1962), pp. 75-82.

Wasserthell, Sylvia. "Computer Assistance in Statistics," Improving College and University Teaching, Vol. 17, No. 4, (Autumn, 1969), pp. 264-266.

Weaver, William C. "The Computer and Pedagogy," Journal of Business Education, Vol. 50, No. 4, (January, 1975), pp. 157-158.

Wegman, Edward J. "Computer Graphics in Undergraduate Statistics," International Journal of Mathematical Education in Science and Technology, Vol. 5, No. 1, (January-March, 1974), pp. 15-23.

Weiner, M.G. "An Introduction to War Games." Santa Monica, California: Rand Corporation, (August, 1959).

Williams, Richard H. "On the Teaching of Order Statistics and Supporting Conversational Computer Programs at the Pre-College Level," Contemporary Education, Vol. 48, No. 2, (Winter, 1977), pp. 66-72.

Wing, R.L. "Computer-Controlled Economics Games for the Elementary School." Audiovisual Instruction, Vol. 9, (1964), pp. 681-682.

------. "Two Computer-Based Economics Games for Six Graders." American Behavioral Scientists, Vol. 10, No. 11, (1966), pp. 31-34.

------. "The Production and Evaluation of Three Computer-Based Economics Games for the Sixth Grade." Final Report. Westchester County Board of Cooperative Educational Services, (June, 1967), ERIC ED 014227.

Wolf, Gerrit. "Some Research and Teaching with an On-Line Oligopoly Game Using an Artificial Player," Decision Sciences, Vol. 3, (1972), pp. 101-114.

Wood, M.T., and Sobel, R.S. "Effects of Similarity of Leadership Style at Two Levels of Management on the Job Satisfaction of the First Level Manager," Personnel Psychology, Vol. 23, No. 4 (Winter, 1970), pp. 577-590.

Zahn, Donald K. "The Impact of the Computer in the Business Classrooms," Business Education Forum, Vol. 35, No. 6, (March, 1981), pp. 25-26.

IV. PROCEEDING OF CONFERENCES

Anderson, Thomas H.; Anderson, Richard C.; Allessi, Stephen M.; Dalgaard, Bruce R.; Paden, Donald W.; Biddle, W. Barry; Surber, John R.; and Smock, H. Richard. "A Multi-faceted Computer Based Course Management System," in Proceedings of the Second World Conference on Computers in Education. Amsterdam: North Holland Publishing Company, 1975.

Bailey, Daniel E. "Ingredients for Excellence in Computer Based Education System," in Proceeding of National Educational Computing Conference. (NECC 1979), The University of Iowa, June 25-27, 1979, pp. 2-6.

Beck, Henry J., and Parrish, Roy James, Jr. "Integrating Computer Concept into Principles of Accounting." In Proceeding of Conference on Computers in the Undergraduate Curricula, East Lansing, Michigan, June 20-22, 1977, 19 pps.

Bonello, Frank J.; and Davidson, William I. "Computer Assisted Instruction in Economics: at the University of Notre Dame," Proceeding of the 1972 Conference on Computer in Undergraduate Curricula. June 12-14, 1972 (Atlanta, Georgia, Distributed by the Southern Regional Educational Board in cooperation with the Dept. of Continuing Education, Georgia Institute of Technology, 1972), pp. 137-154.

Bonney, D.R. "Three Simulations for the Introductory Economics," Proceedings of a Conference on Computers in the Undergraduate Curricula, 1970.

------. "Three Simulations for the Introductory Economics Course," Conference on Computer in the Undergraduate Curricula. June 23-25, 1971 (Hanover, N.H.; Dartmouth College with Support from the National Science Foundation, 1971), pp. 5.16-5.20.

Bowman, William R. "Short-Run Forecasting of the U.S. Economy." In Proceeding of NECC/2. National Educational Computing Conference 1980. Norfolk, Virginia, June 23-25, 1980, pp. 16-18.

Brown, Francis J. "A Computer Calculated Index." Paper presented at the Annual Meeting of the American Business Communication Association, Dayton, Ohio, April 7-8, 1978, 15 pps.

Cole, D.C., and Hamlon, J.W. "Micromod: Description, Use and Evaluation of a Microeconomics Computer Game," Proceedings of the 1972 Conference on Computers in Undergraduate Curricula, 1972, pp. 121-24.

Cyert, Richard M. "A Description and Evaluation of Some Firm Simulations." Proceedings of the IBM Scientific computing Symposium on Simulation Models and Gaming. IBM, White Plains, New York 1966.

Dalgaard, Bruce R.; Paden, Donald W.; and Anderson, Thomas H. "Computer Based Course Management in the First Course in Economics," Proceedings of the Fifth Annual Meeting of the Illinois Economic Association, Chicago, 1975.

Dalgaard, Bruce R.; Askalani, M.H.; and Thompson, Paul J. "Computer Assisted Instruction in Economics: Developments, Results and Challenges," Proceedings of AEDS-81 Convention, Minneapolis, Minnesota, May 5-8, 1981, pp. 59-64.

Davisson, W.I., and Bonello, F.J. "Computer Assisted Instruction in Economics at the University of Notre Dame," Proceedings of the 1972 Conference on Computers in the Undergraduate Curricula, pp. 137-54.

DeFelice, Frank. "Interacting Computer Programs in Economics Via Time-Sharing Terminals," Proceeding of the 1972 Conference on Computer in Undergraduate Curricula. June 12-14, 1972, (Atlanta, Georgia) Distributed by the Southern Regional Educational Board in Cooperation with the Department of Continuing Education, Georgia Institute of Technology, 1972, pp. 155-59.

Dill, W.R. "The Educational Effects of Management Games," in W.R. Dill et al (eds.) Proceedings of the Conference on Business Games as Teaching Devices. New Orleans: Tulane University, 1961, pp. 61-72.

Dudley, D.A.; Elledge, B.; and Mukherjee, T. The Effectiveness of Computer-Augmented Instruction in Economics: Some Additional Evidence. In Proceeding of Conference on Computers in the Undergraduate Curricula, Pullman, Washington, 1974, pp. 153-58.

Edgar, S. Michael. "Teaching Statistics, While Simultaneously Saving Time, Chalk, Etc...," Department of Business Administration, Texas University, Arlington. Paper Presented at the Conference on Computers in the Undergraduate Curricula, Claremont, California, June 18-20, 1973, 9 pps.

Gailey, Frances. "An Analysis of Development/Use Time Ratios for a Computer Assisted Instruction Unit on Basic Household Electricity." Paper Presented at Association for the Development of Computer-Based Instructional Systems, Ann Arbor, Michigan, August 7-9, 1973. 9 pps.

Gallion, Leona M., and Kavan, C. Bruce. "A Computer Based System for the Development and Analysis of Vocabulary Controlled Dictation Materials." Paper Presented at the Annual Meeting of the American Educational Research Association, Washington, D.C., March 30 - April 3, 1975.

Gardner, Mark L. "A Computer-Assisted Commercial Banking Game for the Undergraduate Curriculum." In Proceeding of 1976 Conference on Computers in the Undergraduate Curricula (CCUC/7). Binghamton, NY, June 14-16, 1976, pp. 21-30.

Gillespie, Robert W. "Computer Assisted Instruction in Economics: An Approach for Illustrating General Equilibrium Concepts." Computer-Based Education Lab., Illinois University, Urbana. Paper Presented at the Conference on Computers in the Undergraduate Curricula; Claremont, California, June 18-20, 1973. 18 pps.

Grey, C. "Performance as a Criterion Variable in Measuring Business Gaming Success: An Experiment with a Multiple Objective Performance Model," AIDS Second Annual Southeastern Regional Conference, April 27-28, 1972.

Hall, Keith A. "Computer-Based Education: Research, Theory and Development." In Proceeding of National Educational Computing Conference. The University of Iowa, June 25-27, 1979, pp. 7-13.

Hancock, W.M., and Golding, E.I. "An Experiment in the Use of Management Games in Teaching," pp. 90-93 in W.R. Dill et al (eds.) Proceedings of the Conference on Business Games as Teaching Devices. New Orleans: Tulane University, 1961.

Henderson, William L. "Computer-Assisted Learning-Application to Planning in Command Economics." In Proceedings of 1977 Conference on Computers in the Undergraduate Curricula (CCU/8). Michigan State University, June 20-22, 1977, pp. 55-62.

Holbrook, Robert S. "The Use of Economic Policy Games as an Aid to Student Understanding," Proceeding of a Conference on Computer in the Undergraduate Curricula, June 16-18, 1970, (Iowa City, Iowa: Center for Conferences and Institutes, The University of Iowa, 1970) pp. 5.12-5.20.

Jameson, K.P.; Bonello, F.J.; and Davisson, W. Teaching Economics with the Computer as a Laboratory. In Proceeding of Conference on Computers in the Undergraduate Curricula, Pullman, Washington, 1974, pp. 147-48.

Jamison, B. Sell Apples, Plants, Lemonade and Bicycles. Lauderdale, Minnesota, Minnesota Educational Computing Consortium, 1976.

Johnson, J.W. Development and Use of An Empirical Toolkit for Economics in the Iowa Regional Network. In Proceeding of a Conference on Computers in the Undergraduate Curricula, Claremont, California, 1973, pp.151-54.

------. "The State of the Art of Instructional Computing: A Report from CONDUIT." In Proceeding of National Educational Computing Conference, The University of Iowa, June 25-27, 1979, pp. 14-17.

Kahl, James. "Computer-Based Simulation Models for Community College Business Students." Paper Presented at the Association for Educational Data Systems Annual Convention. New Orleans, Louisiana, April 16-19, 1973, 6 pps.

Kershner, T.R. "The Uses of Computer Simulations in Teaching Macroeconomics," Proceedings of a Fourth Conference on Computers in the Undergraduate Curricula, 1973, pp. 155-59.

Krieger, Ronald A. "Computer-Assisted Forecasting of Economic Aggregates." In Proceeding of 1978 Conference on Computers in the Undergraduate Curricula (CCU/9), June 12-14, 1978, University of Denver, pp. 227-35.

Lorton, Paul, Jr. "Simulated Study of Organizational Theory: The Use of EXPER-SIM in the Undergraduate Business Curriculum." In Proceeding of Conference on Computers in the Undergraduate Curricula, East Lansing, Michigan, June 20-22, 1977.

Lorton, Paul, Jr., and Searle, Barbara W. "Using a Linear Regression Model for Item Selection in CAI" Paper Presented at the American Educational Research Association Annual Conference, San Francisco, California, April 21, 1976. 23 pps.

Lynch, M.E., and Little, C.B. Computer-Assisted Learning Package in Social Policy Analysis. In Proceeding of Conference on Computers in the Undergraduate Curricula, Binghamton, New York, 1976, pp. 307-14.

Mancuso, Louis C. "The Effects of Using a Lecture-Computer Simulation Teaching Methodology in Broadcase Economics." In Proceeding of the Conference on Computers in the Undergraduate Curricula (CCU/6), Fort Worth, Texas, June 16-18, 1975, pp. 163-70.

------. "The Use of Computer Simulation Gaming in Teaching Broadcast Economics." Paper presented at the Annual Meeting of the Broadcast Education Association, Las Vegas, April, 1975, 19 pps.

McVay, Peter O. "Tapping the Appeal of Games in Instruction." In Proceeding of NECC/2 National Educational Computing Conference 1980, Norfolk, Virginia, June 23-25, 1980, pp. 271-75.

Mebane, Dona Davis, and Mebane, Rodney. "Computer-Based Resource Sharing: Diversity and Opportunity." In Proceeding of NECC/2 National Educational Computing Conference 1980, Norfolk, Virginia, June 23-25, 1980, p. 197.

Meyers, E.D., Jr. "IMPRESS and Undergraduate Education in the Social Sciences." In Proceeding of a Conference on Computers in the Undergraduate Curricula, Iowa City, Iowa, 1970, pp. B.23-B.29.

Milner, Stuart D. "An Analysis of Computer Education Needs for K-12 Teachers." In Proceeding of National Educational Computing Conference, The University of Iowa, June 25-27, 1979, pp. 27-30.

Moewes, David S. "Using Macroeconomic Simulations in the Principles Course for the First Time." In Proceedings of 1977 Conference on Computers in the Undergraduate Curricula (CCUC/8), Michigan State University, June 20-22, 1977, pp. 295-300.

Moore, Charles M. "Computer Assisted Laboratory Problems for Teaching Business and Economic Statistics." Paper presented at the Conference on Computers in the Undergraduate Curricula, Claremont, California, June 18-20, 1973, 7 pps.

Munick, Herman, and Allison, John. "On Uses and Misuses of Computer Programs in Statistics." Paper presented at the Conference on Computers in the Undergraduate Curricula, Claremont, California, June 18-20, 1973, 9 pps.

Naylor, J.A., and Baird, W.M. "Interactive Simulation Games in Economics," Conference on Computers in the Undergraduate Curricula, 1977, pp. 75-81.

Nyerges, Richard T., and Reif, Harry L. "Cash Flow: An Interactive Approach Designed to Assist in Student Understanding of the Principles of Cash Management." In Proceeding of 1978 Conference on Computers in the Undergraduate Curricula (CCU/9), June 12-14, 1978, University of Denver, pp. 249-59.

Orr, John A. "Time-Sharing Aided Research and Instruction," Proceedings of a Conference on Computers in the Undergraduate Curricula, 1970, pp. 5.28-5.32.

------. "Time-Sharing Aided Research and Instruction," Conference on Computers in the Undergraduate Curricula, June 23-25, 1971, (Hanover, New Hampshire: Dartmouth College with from the National Science Foundation, 1971), pp. 5.28-5.32.

Paden, Donald W. and Barr, Michael D. "Computer-Assisted Instruction for Large Classes in Economics." In Proceeding of National Educational Computing Conference, The University of Iowa, June 25-27, 1979, pp. 227-32.

Patterson, M., and Stevenson, W. "Introducing the Computer to Economics: Overcoming Inertia. In Proceeding of Conference in the Undergraduate Curricula, Binghamton, New York, 1976, pp. 315-18.

Powers, Kathleen A. "Economic Theory and the Computer: The Macro-economic Simulation." In the 1976 AEDS International Convention Proceedings, Phoenix, Arizona, May 3-7, 1976, pp. 205-209.

Rapport, Paul N. "The DYNSIM System: A System for Student Investigation of Economic Models," Proceedings of a Conference on Computers in the Undergraduate Curricula, June 23-25, 1971, (Hanover, New Hampshire: Dartmouth College with support from the National Science Foundation, 1971), pp. 82-93.

Reichert, Alan K. and Greenberg, M.J. "The Application of Simulation Techniques to Enhance Student Understanding of Commercial Bank Management." In Proceeding of 1978 Conference on Computers in the Undergraduate Curricula (CCU9), June 12-14, 1978, University of Denver, pp. 364-78.

Robinson, J.A. "A Research Design for Comparing Simulation with Case Studies and Problem Papers in Teaching Political Science," pp. 123-129 in W.R. Dill et al. (eds.) Proceedings of the Conference on Business Games as Teaching Devices. New Orleans: Tulane University, 1961.

Roh, C., and Handler, P. "Dynamics of Population and Economic Growth: A Computer-Based Instructional Program," Proceedings of a Fourth Conference on Computers in the Undergraduate Curricula, 1973, pp. 248-54.

Rubner, Victoria Petro, et al. "Stat-Concept: An Interactive Computer Package Supporting a First Course in Educational Statistics." Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, Illinois, April, 1974, 24 pps.

Schenk, Robert. "Simulating the Great Depression in Introductory Macroeconomics." In Proceeding of National Educational Computing Conference, the University of Iowa, June 25-27, 1979, pp. 179-88.

Shannon, D.C., and Johnson, K.H. ""The Money Game" As a Classroom Exercise." Lexington College of Business and Economics, Kentucky University; Paper presented at the Conference on Computers in the Undergraduate Curricula, Claremont, California, June 18-20, 1973, 6 pps.

Sharac, Jo-Anne, and Russ, Darlene. "Evaluation of Student Learning and Information Utilization in a Computer-Simulated Economic Model," Proceeding of a Conference on Computers in the Undergraduate Curricula, June 23-25, 1971, (Hanover, New Hampshire: Dartmouth College with support from the National Science Foundation, 1971), pp. 94-97.

Stanford, Richard A. "Ceteris Paribus Methodology and Computerized Economic-Business Models," Proceeding of the Conference on Computers in Undergraduate Curricula, June 12-14, 1972, (Atlanta, Georgia, Distributed by The Southern Regional Educational Board in Cooperation with the Department of Continuing Education, Georgia Institute of Technology, 1972), pp. 161-66.

Streeter, C. Edward. "The Future of Computer Assisted Instruction: A Summary and Analysis of The Carnegie Commission Report Computer and the Learning Process in Higher Education." In the 1976 AEDS International Conference Proceedings, Phoenix, Arizona, May 3-7, 1976, pp. 387-92.

Stockburger, David W. "Teaching Statistical Concepts Using Microcomputer Simulations." In Proceeding of Southwestern Psychological Association Meeting, Oklahoma City, Oklahoma, April, 1980, 32 pps.

Sullivan, James J. "Computer Based Instruction in Economics: A Report on Facilities and Applications at UCSB," Conference on Computer in the Undergraduate Curricula, June 23-25, 1971, (Hanover, New Hampshire: Dartmouth College with support from the National Science Foundation, 1971) pp. 5.21-5.27.

Tanis, Elliot A. "A Computer Laboratory for Mathematical Probability and Statistics." Hope College, Holland, Michigan Paper presented at the Conference on Computers in the Undergraduate Curricula, Claremont, California, June 18-20, 1973, 11 pps.

Tedford, John R. "Use of A Deterministic Macroeconomic Computer Model as a Teaching Aid in Economic Statistics." In Proceedings of 1977 Conference on Computers in the Undergraduate Curricula (CCUC/8), Michigan State University, June 20-22, 1977, pp. 63-70.

Tennyson, Robert. "Adaptive Instructional Models: Diagnostic and Prescriptive." Paper presented at the Annual Meeting of the American Educational Research Association, Toronto, Canada, March, 1978, 11 pps.

Thompson, Fred A. "Sample Executions of Computer Programs for Economics Instruction." Riverside City College, California. Paper presented to NSF Institute in Contemporary Economics and Economics Education, University of California at Los Angeles, Summer, 1971, 41 pps.

Tubb, Gary W. "Current Use of Computers in the Teaching of Statistics." Paper presented at the Computer Science and Statistics Annual Symposium (10th), Gaithersbury, Maryland, April 14-15, 1977.

Utter, Merlin and Wilkinson, John W. "Some Classroom Experiences in the Teaching of Empirical Model Building and Regression Analysis." Paper presented at the Conference on Computers in the Undergraduate Curricula, Claremont, California, June 18-20, 1973, 3 pps.

Van Sickle, R.L. "Factors Affecting Intellectual Skill Performance in Instructional Simulation Games." Presented at the Annual Program of the American Educational Research Association, April, 1977.

Vorderlandwehr, Dale A. "Teaching Applied Economics to Graduate Students of Business and Management with the Use of Computer Models." In the 1976 AEDS International Conference Proceedings, Phoenix, Arizona, May 3-7, 1976, pp. 268-70.

Ward, Robert T. and Rudnick, Martin. "Using Graphics for CAI with Mini-Computer." In Proceeding of National Educational Computing Conference, The University of Iowa, June 25-27, 1979, pp. 271-73.

Werner, Frank W. "Improvements in Financial Management Simulation at Rutgers College." In Proceedings of 1976 Conference on Computer in the Undergraduate Curricula (CCUC/7), Binghamton, New York, June 14-16, 1976, pp. 45-52.

------. "A Small Instructional Macroeconomic Model of the United States Economy." In Proceeding of National Educational Conference, The University of Iowa, June 25-27, 1979, pp. 189-93.

Williamson, J.P. "The Time-Sharing Computer in the Business Curriculum." In Proceeding of the Second Annual Conference on Computers in the Undergraduate Curricula, Hanover, New Hampshire, 1971, pp. 499-507.

Wilson, S., and Billingsley, R. "Computer Simulations of Economic Models for Instructional Usage," Proceedings of the 1972 Conference on Computers in Undergraduate Curricula, pp. 129-36.

Wolin, John. "Computerized Gaming and Simulation in Higher Education: The METRO-APEX Experience." In Proceedings of a Conference on Computers in the Undergraduate Curricula (CCUC/8), Michigan State University, June 20-22, 1977, pp. 301-306.

Wood, William B. and Hodgetts, Richard M. "Simulation Gaming in the Management Curriculum Present and Future." In the 1976 AEDS International Conference Proceedings, Phoenix, Arizona, May 3-7, 1976, pp. 245-50.

Zincone, L.H. "Using Computer Games to Teach Macroeconomics," Proceedings of a Conference on Computers in the Undergraduate Curricula, 1970.

------. "Using Computer Games to Teach Macro-Economics," Conference on Computers in the Undergraduate Curricula, June 23-25, 1971, (Hanover, New Hampshire: Dartmouth College with support from the National Science Foundation, 1971), pp. 5.1-5.11.

V. UNPUBLISHED MATERIALS

Anderson, Thomas H., et al. "Computer Assisted Problem Solving in an Introductory Statistics Course. Technical Report No. 56." Bolt, Beranek and Newman, Inc., Cambridge, Massachusetts; Center for the Study of Reading, Illinois University, Urbana. (August, 1977); Sponsoring Agency: National Institute of Education (DHEW), Washington, D.C.

Alschuler, A.S. "The Achievement Motivation Development Project: A Summary and Review." Occasional Paper 3. Harvard University Center for Research and Development of Educational Differences, 1967.

------. "How to Increase Motivation Through Climate and Structure." (forthcoming).

Askalani, Mohamed, and Thompson, Paul. "Computer Assisted Instruction in Economics," unpublished manuscript, October, 1980.

------. "Computer Assisted Instruction in Economics, Report from the National Specialized Center Computer Assisted Instruction in Economics," paper presented at Annual Meeting of Economic Educators, Honolulu, Hawaii, October 15, 1981.

Beaujon, Hendrik Johannes. "An Interactive, Graphical Display System for Illustrating Elementary Properties of Statistical Distributions." Thesis submitted to the Department of Computer and Information Science of the University of North Carolina, Chapel Hill. 1970, 61 pps.

Billinngley, R.V., and Wilson, Stanley. "Program and Model Documentation Standards." Program and Model Documentation 71-1, Department of Agricultural Economics, Texas A&M University, February, 1971.

Bonello, Frank J.; Davisson, William I.; and Jameson, Kenneth. "The Computer as a Laboratory for the Teaching of Economics," 14 pps.; University of Notre Dame.

Booms, Bernard H., and Kaltreider, D. Lynne. "Computer-Aided Instruction for Large Elementary Courses," 13 pps.; The Pennsylvania State University.

Cage, E.W., and Hetzel, N.L. "CAGE: A Macroeconomic Policy Simulation," (a draft copy submitted to CONDUIT by North Carolina Educational Computing Service), October, 1975, (mimeographed).

Canter, Deborah Dean. "Computer-Assisted Instruction for Teaching Decision Making in Good Systems Administration," Dissertation, Ph.D., The University of Tennessee, (1977), 127 pps

Chambers, Jack A., and Bork, Alfred. "Computer Assisted Learning in U.S. Secondary/Elementary Schools," Center for Information Processing, California State University Fresno, Report #80-03, July, 1980.

Chance, William Alan. "Two Computer Models of Economic Activity with a Test of Model II Against the Performance of the United States Economy in the Period 1951-1959," Dissertation, Ph.D., University of Kansas, (1964), 289 pps.

Chu, Kong. "Computer Simulation of Certain Stochastic Relationships in Micro-Economic Systems," Dissertation, Ph.D., Tulane University, (1964), 166 pps.

Cox, Steven R. "Computer Assisted Instruction and Student Performance in Macroeconomic Principles," 26 pps.; Arizona State University.

Daellenbach, Lawrence A., et al. "An Evaluation of the Cognitive and Affective Performance of an Integrated Set of CAI Materials in the Principles of Macroeconomics." Studies in Economic Education, No. 4, Center for Economic Education, Wisconsin University, La-Crosse. (February, 1977).

Daellenbach, L.A.; Schoenberger, R.E.; and Whers, W.E. CAI Materials for Introductory Macroeconomics Course Vol. 1. Center for Economic Education, 11-2-11-14 pps.; LaCrosse, Wisconsin, University of Wisconsin, 1977.

Dale, A.G., and Klasson, C.R. "Business Gaming: A Survey of American Collegiate Schools of Business," Bureau of Business Research, University of Texas, Austin, Texas, 1964.

Dolbear, F. Trenery, Jr. "Teaching Macroeconomics with a Computer Simulation. Final Report." Brandeis University, Waltham, Massachusetts. March 1972, 29 pps. Sponsoring Agency: Office of Education (DHEW), Washington, D.C. Bureau of Research.

Dudley, Dean A.; Elledge, Barry; and MuKherjee, Tridib. "The Effectiveness of Computer-Assisted Instruction in Economics: Some Additional Evidence," 12 pps.; Appalachian State University.

Dunham, Loren, and Ericson, Burt. "Gross National Product: A Macroeconomics Simulation," Mankato, Minnesota, Southern Minnesota School Computer Project, Mankato State University, 1971.

Dunham, Loren J. "Computer-Assisted Instruction and the New Social Studies: An Approach for Classroom Teachers." Unpublished Thesis. Mankato, Minnesota, Mankato State University, 1977.

Emery, David and Schoene, Jean. "Computer Gaming and Learning: A Note on Retention," 15 pps.; St. Olaf College.

Fisher, Glen; Boehlje, Michael; and Roush, Clint. "A Management Game for Non-Metropolitan Commercial Banks--A Game Manual." Research Report P-703. Agricultural Experiment Station, Oklahoma State University, Stillwater, October, 1974.

Fletcher, J.L. "The Effects of Two Elementary School Social Studies Games: An Experimental Field Study." Ed.D. Dissertation. Harvard University, 1969.

Francis, Larry Douglas. "An Investigation of Misteaching Using Computer-Assisted Instruction," Dissertation, Ph.D., University of Illinois at Urbana-Champaign, (1973), 78 pps.

Frey, M.W. "An Experimental Study of the Influence of Disruptive Interactions Induced by Authoritarian-Equalitarian Leader-Follower Combinations Upon the Decision Making Effectiveness of Small Groups," Ph.D. Dissertation. Pennsylvania State University, 1963.

Gentry, James A. "Simulation of the Capital Investment Process: A Learning Technique," 25 pps.; University of Illinois at Urbana-Champaign.

Gittings, Thomas Anthony, "A Computer Program for Simulating Theoretical Macroeconomic Models," Dissertation, Ph. D., University of Colorado, (1974), 154 pps.

Gullahorn, John; and Gullahorn, Jeanne. "Computer Simulation of Role Conflict Resolution," System Development Corporation, Santa Monica, California, 1965.

Hall, Michael A. "Social Sciences Instructional Programming Project;" 22 pps.; including appendixes; Beloit College.

Hallworth, H.J., and Brebner, Ann. "Computer Assisted Instruction in Schools: Achievements, Present Developments, and Projections for the Future," Calgary University, Alberta. Sponsoring Agency: Alberta Department of Education, Edmonton. Planning and Research Branch. June, 1980. 243 pps.

Hanlon, J. William, and Chichon, Paulette A. "MICROMOD, A Computer Game for Teaching Microeconomics," 17 pps.; Georgia State University and the Georgia Council of Economic Education.

Hinton, John R. "Individualized Learning Using Micro Computer CAI." Aptos, California, Gabrillo College, March, 1980.

Hsiao, J.C. "The Independence of Teaching Technique and Student-Ratings of the Instructor," 14 pps.; Southern Connecticut State College.

Hunt, J.G., and Healey, S.M. "A Laboratory Investigation of the Effects of Leadership Style Interactions of Two Levels of Management," unpublished manuscript, University of Illinois, 1967.

Johnson, Robert P. "The Use of Computer Gaming in an Intermediate Macroeconomics Course," 20 pps.; Central Washington State College.

Kandoole, Benson F. "A Nonlinear Simulation Model of the American Economy," Dissertation, Ph.D., University of Southern California, (1978).

Kearsley, Greg, et al. "The Use of Microcomputers for Training: Business and Industry," Project Description, Human Resources Research Organization, Alexandria, Virginia, March 1981, 10 pps.

McKenney, James L. "Simulation Gaming for Management Development," Graduate School of Business Administration, Harvard University, Boston, Massachusetts, 1967.

McNelis, Paul D. "A Simulation Analysis of Monetary Policy and Macroeconomic Adjustment," Dissertation, Ph. D., The John Hopkins University, (1974), 218 pps.

Martin, Carrick Allen. "Time-Shared Computer-Assisted Instruction in Elementary Accounting." Dissertation, Ph.D., University of Minnesota, (1974), 316 pps.

Marzouk, M.S. "A Canadian Simulation Model for Teaching Macroeconomics," 19 pps.; York University.

Margolis, Marvin S. "The Use of the Computer in Undergraduate Econometrics Classes," 6 pps.; Federal Reserve Bank of Dallas.

Mattson, F.A. "Macroeconomics," Laboratory for Political Research, University of Iowa, 1969.

------. "Macroeconomics," Iowa City, Iowa, Laboratory for Political Research, University of Iowa, 1973.

Millstein, Eugene Joel, "Asynchronous Sequencing of Information in a CAI Course in Economics," Dissertation, Ed.D., Harvard University, (1971), 241 pps.

Novick, Melvin R., et al. "Display Book for the Computer-Assisted Data Analysis (CADA) Monitor." Research Report. Iowa University, Iowa City, 1980.

------. "Manual for the Computer-Assisted Data Analysis (CADA) Monitor (1980)." Research Report. Iowa University, Iowa City, 1980. Sponsoring Agency: National Science Foundation, Washington, D.C.

Orr, John A. "Teaching Monetary Economics with Time Sharing," 19 pps.; Florida Atlantic University.

Potter, G.B. "An Exploratory Study of Psychological Factors in Business Simulation Games," unpublished Master's thesis, University of Illinois, 1965.

Philippatos, G.C., and Moscato, D. "Laboratory Experiments with Large-Size Business Games." Pennsylvania State College of Business Administration, 1972, unpublished.

Puffer, Frank Williams. "Economic Policy by Computer - The Dynamic Programming Approach to Macroeconomic Policy," Dissertation, Ph.D., Brown University, (1965), 228 pps.

Redman, Milton. "The Computer in the Classroom: The Case of Money Creation," 8 pps.; Florida Atlantic University.

Robinson, J.N. "A Macroeconomic Stabilization Game," 9 pps.; University of Reading, England.

Rockwood, Charles E. "Electronic Simulation of Undergraduate Level Economic Models," 16 pps.; The Florida State University.

Rowland, K., and Gardner, D. "The Use of Business Gaming in Education and Laboratory Research." University of Illinois College of Commerce and Business Administration Faculty Working Paper 10, 1971.

Rushby, N.J. "Computer Based Learning in the Soviet Union - II. A Report on a Study Visit to Moscow, November - December 1978," Imperial College Computer Centre, London University, (England), April, 1979, 35 pps.

Salancik, J.R.; Gordon, J. Theodore; and Adams, Neale. "On the Nature of Economic Losses Arising from Computer-Based System in the Next Fifteen Years," The Institute of the Future: R-23, March, 1972.

Schmalensee, Richard L. "The BEAST: A Classroom Exercise in Applied Microeconomics," Working Paper, Massachusetts Institute of Technology, August, 1968.

------. "GLOOM: A Computerized Oligopoly Game," Working Paper, Alfred P. Sloan, School of Management, Cambridge, M.I.T., September, 1968, pp. 351-368.

Scheidell, J.M. "The Potential of Time Sharing for Economic Education," 33 pps.; California, Florida Atlantic University, 1974, p. 29.

Schmid, H. Giles. "An Experiment on the Reliability and Validity of the Performance Measure," Profits in Two Management Games, University of Minnesota, 1969.

Sivesind, Charles Milton. "A Dynamic Programming Simulation of Optimal Monetary Policies Designed to Stabilize Prices and Employment," Dissertation, Ph.D., Iowa State University, (1975), 181 pps.

Smith, Jackie Gayle, "A Micropolitan Economic Development Simulation Model," Dissertation, Ph.D., Oklahoma State University, (1978), 207 pps.

Sprague, H.T. (n.d.) "Using Simulations to Teach International Relations," Western Behavioral Sciences Institute, (mimeographed).

Stanford, R.A. "Computer Aided Instruction of Preference and Demand Theory," 21 pps.; Furman University.

------, "Economic Simulation Models for Computer Supplemented Instruction: A Provisional User's Manual," Greenville, South Carolina, Furman University, 1973.

Strother, G.B., et al. "Educational Applications of Management Games." Final Report, Wisconsin University, Madison, (31, August, 1966), 260 pps.

Su, Vincent, and Tansey, Frank. "The Teaching of Macroeconomics with a Computerized Game--A Progress Report," 24 pps.; City University of New York.

Sullivan, Daniel John, "Computer Assisted Instruction for Management and Business Study: A Look to the Future." Dissertation, Master's Thesis, George Washington University, September, 1975, 125 pps.

Sullivan, James J. "The Economics Laboratory: Purposes and Functions," 33 pps.; Santa Barbara, University of California.

Swanson, James M., et al. "Using OMNITAB Interactively in a Statistics Laboratory." Project Description, Texas University, Austin. Project C-BE; 2 April, 1973, 24 pps.; Sponsoring Agency: National Science Foundation, Washington, D.C.

------. "Using OMNITAB to Teach Applied Statistics." Project Description, Texas University, Austin. Project C-BE; 21 May, 1973. Sponsoring Agency: National Science Foundation, Washington, D.C.

Taerum, Terry Verne. "A Teaching Procedure for Computer Assisted Instruction in Mathematics and Statistics," Dissertation, Ph.D., University of Calgary (Canada), (1979).

"The Micro TIPS-Cases-Programmed Learning Course Package." Heriot-Watt Univ., Edinburgh (Scotland). Esmee Fairbairn Economics Research Center. Sponsoring Agency: National Institute of Education (DHEW), Washington, D.C., 1976, 341 pps.

Thompson, Fred A. "Gaming via Computer Simulation Techniques for Junior College Economics Education, Final Report." Riverside City College, California, (June 1968), 73 pps.

Trapp, James Nelson. "An Econometric Simulation Model of the United States Agricultural Sector," Dissertation, Ph.D., Michigan State University, (1976), 342 pps.

Treyz, G.". "Introduction to Macroeconomics," Amherst, Maine, 1974, (mimeographed).

Van Antwerp, Dacia. "A Study of Computer Assisted Instruction and the Lecture Method in the Presentation of College Economics." Dissertation, Ph.D., Michigan State University, (1974), 135 pps.

Whitacre, Robert James. "Simulation and Control in Macroeconomic Growth Theory," Dissertation, Ph.D., University of California, Santa Barbara, (1978), 130 pps.

Wilson, Stanley E., and Stedman, Cary. "Keynes-Computer Simulation of a Macro-Economic Model," Computer Program Documentation for Texas Regional Academic Computer Experiment, Department of Industrial Engineering, Texas A&M University, Copes Form No. 10.

Wilson, Stanley E. "Economic Model--Simple Firm," Computer Program Documentation for Texas Regional Academic Computing Experiment, Department of Industrial Engineering, Texas A&M University, Copes Form No. 14.

------. "Economic Model-Market," Computer Program Documentation for Texas Regional Academic Computer Experiment, Department of Industrial Engineering, Texas A&M University, Copes Form No. 13.

Wing, Richard L., et al. "The Production and Evaluation of Three Computer-Based Economics Games for the Sixth Grade, Final Report." Westchester County Board of Cooperative Educational Services, Yorktown Heights, New York, (June, 1967), 191 pps.

Yanofsky, S.M. "Investigations into Student Attitudes Toward School: A Review of Methodologies," Monograph 2-B. Harvard University Center for Research and Development on Educational Differences, 1967.

Zaremba, Joseph. "The APL/370 System Aids Instruction in Econometrics," 14 pps.; State University College of Geneseo.

Zeckhauser, Richard; Hemishian, Pamela; and Shesso, Thomas. "General Equilibrium, A Computation Technique for Learning," 7 pps.; Harvard Institute of Economic Research, Discussion Paper No. 311, Harvard University, August 1973.